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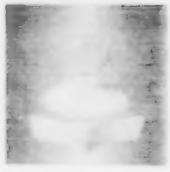
Culture, Tourism and the Centre for Education Statistics

Understanding Culture Consumption in Canada

2005



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Culture, Tourism and the Centre for Education Statistics
Research papers

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Jacques Ewoudou
Statistics Canada

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Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued cooperation and goodwill.

Acronyms

GSS	General Social Survey
SOR	Stereotype ordered regression
VIF	Variance inflation factors

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Abstract

A socioeconomic profile of individuals participating in different cultural activities can provide useful insights to various stakeholders. It can give organizations concerned with the delivery and the commissioning of culture projects or programmes an understanding of those individuals who are most likely to attend their events and which groups are underrepresented and therefore possibly identify potential sources of market growth.

In this research paper, we use data derived from the culture supplement of Statistics Canada's 2005 General Social Survey to examine, from a multivariate perspective, cultural participation across socioeconomic and demographic attributes. We differ from past Canadian quantitative studies in two main ways. First, our analysis covers a wider array of culture activities, often enjoyed by Canadians of all age and income groups. Second, instead of focussing on whether a person participates or doesn't participate in an activity (as past research often has), we based our study on the number of times a respondent participated in the respective culture activity. Using this key participation indicator, we do not understate either the importance of any demographic group at a given culture activity if that group participates an unusually high number of times nor do we overstate the effect of a demographic group in the event that the absolute frequency is unusually low.

Our multivariate analysis, in line with past empirical research, shows that household income, economic activity and educational qualification are all associated with greater participation in culture activities. Also, we provide evidence suggesting that differences in culture consumption are related to family background and the educational level of a conjugal partner. However, the impact of the latter exceeds that of the former, for all culture activities.

1. Introduction

A number of international studies have explored the socioeconomic composition of culture audiences. Common findings are that income, occupation and education are all associated with greater attendance at, or participation in, most culture activities (for early work in this area see Baumol and Bowen, 1966; Book and Globerman, 1975; Globerman and Book, 1977; for literature reviews, see, Ateca-Amestoy, 2005; Borgonovi, 2004; Seaman, 2005; Sturgis and Jackson, 2003). This paper contributes to that literature by using the culture supplement of Statistics Canada's 2005 General Social Survey (GSS) to investigate the extent to which socioeconomic characteristics influence the number of times Canadians aged 15 and older participate in the following activities: attend theatrical performances or popular music performances; visit historic sites, conservation areas or nature parks; go to a public gallery or art museum; listen to music; go to a movie or drive-in; watch videos; read books or magazines; and use a library during a year.[1]

In so doing, we also add to other Canadian studies which have examined culture participation from a multivariate perspective. In one such study, Bourdeau (2002) found that gender, age, educational level, household income and whether one was born in or outside of Canada are all important determinants of participating in at least one of the following culture activities: dancing, acting, singing as part of a group, choir or solo, writing, taking photographs and playing musical instruments. These factors were also positively associated with participating in culture events as audience members or visiting cultural or heritage sites as visitors. In another study, Fisher and Preece (2003) showed that adult individuals who attended only "classical music" concerts (i.e., attended at least one of the following: symphonic, chamber, choral or opera music concert) were more likely to be older women and foreign-born individuals , whilst those who attended "classical music" and "other music" concerts (i.e., attended at least one pop, rock, jazz, blues, folk or country music concert) were more likely to be younger, male and urban. Fisher and Preece also noted that education and income have strong positive and significant effects on attendance at musical concerts.[2]

While the findings from Bourdeau (2002) and Fisher and Preece (2003) are useful, they both treat culture participation as a dichotomous phenomenon, and estimate a binary indicator variable as a function of individual socioeconomic attributes. A major disadvantage of this approach is that the importance of any demographic group at a given culture activity will be understated if that group participates an unusually high number of times per period, and be overstated in the event that the absolute frequency is unusually low (Seaman, 2005). Thus it is quite reasonable to argue that factors affecting whether or not a person participates could be significantly different from factors affecting frequency of participation. Furthermore, the focus of these multivariate studies is quite narrow, and excludes significant types of cultural consumption such as going to the cinema, reading books and magazines, viewing videos and listening to music. As Charts 1 and 2 show,

these types of cultural activities constitute important forms of cultural consumption often enjoyed by Canadians of all income and age groups.[3]

The idea that parents' education plays an important role on cultural orientations and behaviour is well documented in international research. For instance, Borgonovi (2004), and Lewis and Seaman (2004) found that people whose mother and father possess higher levels of educational attainment are more likely to belong to culture audiences in the United States, all other things remaining equal. Other researchers such as Bergonzi and Smith (1996) and Kracman (1996) have also noted that Americans from backgrounds with a higher level of socioeconomic status are more likely to receive early exposure to culture. This in turn has an important influence on their latter consumption of most culture commodities. Despite this empirical evidence, prior Canadian quantitative research on culture participation has ignored the relationship that may exist between family background, as measured by mother and father's educational qualifications and culture participation. Instead, Canadian research has essentially focussed on the impact that standard personal characteristics have on participation behaviour.

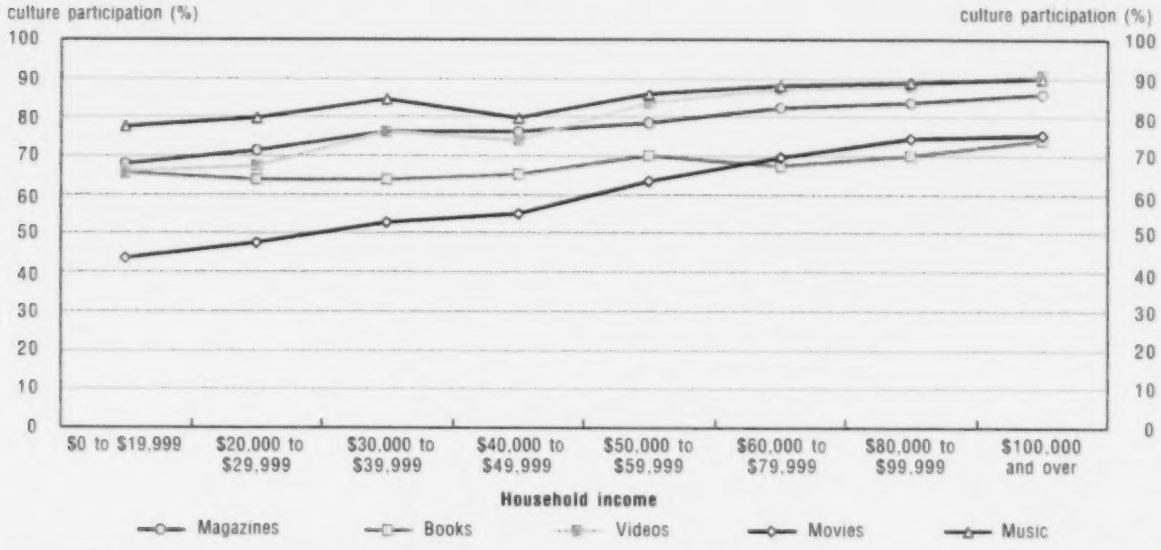
As a complement to this international literature, as well as going beyond prior Canadian research, we provide new Canadian evidence of the influence of people's "social capital" on their level of culture consumption.[4] However, we also go further and explore empirically the effect that an adult's relationships in later life has on his or her participation in culture activities, taking into account the educational attainment of an individual's partner or spouse. Controlling for the educational qualification of the conjugal partner is important in analyses of culture participation as it has been found to be a good representative of people's current social capital, which in turn plays a crucial role in the transmission of cultural interests and largely contributes to the formation of their preferences (DiMaggio and Useem, 1978b; Upright, 2004, Van Berkel and De Graaf, 1995).

Why focus on social correlates of culture participation in Canada? A socioeconomic profile of individuals participating in different cultural activities can provide useful insights to various stakeholders. It can give organizations concerned with the delivery and the commissioning of culture projects or programmes an understanding of those individuals who are most likely to attend their events. Also, identifying the socioeconomic and demographic groups most likely to attend cultural events can contribute to the growth of the market for those cultural events in Canada.

The remainder of the paper is organized as follows. Section 2 gives a brief overview of the 2005 Time Use Survey (subsection 2.1), presents a descriptive analysis (subsection 2.2) and investigates linear correlations (subsection 2.3). Section 3 outlines our estimation strategy (subsection 3.1) and provides a formal discussion of the variables used in our analysis (subsection 3.2). The estimates of the participation equations are presented in Section 4. Section 5 concludes. All tables are in the Appendix.

Chart 1

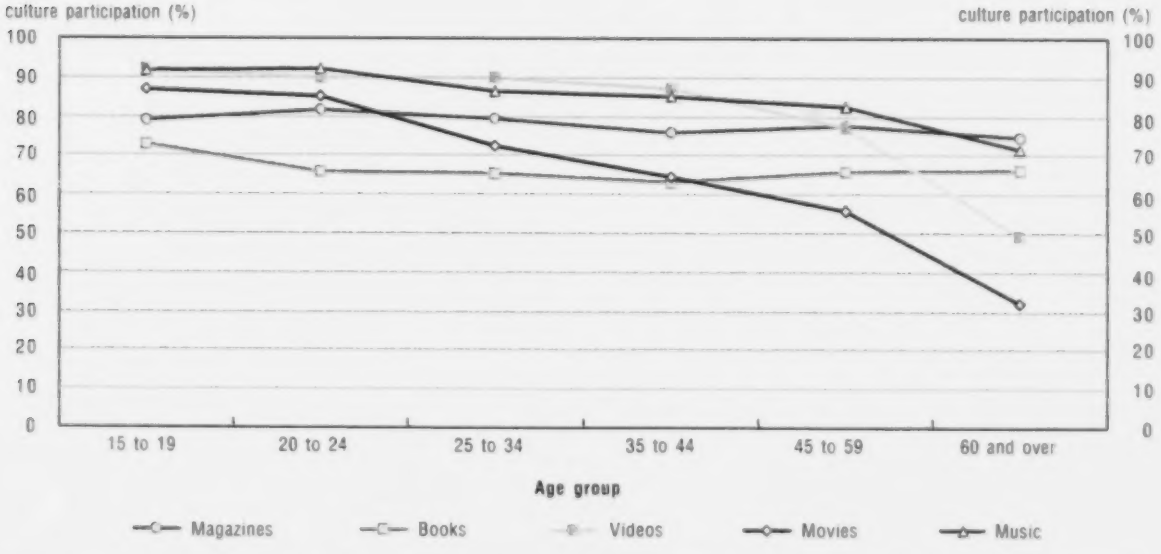
Participation in cultural activities by household income, Canada, 2005



Source: Statistics Canada, 2005 General Social Survey.

Chart 2

Participation in cultural activities by age, Canada, 2005



Source: Statistics Canada, 2005 General Social Survey.

2. Data and descriptive statistics

2.1 2005 General Social Survey (GSS) - Time Use

Our analysis is based on the culture component of Statistics Canada's 2005 GSS, which contains individual-level information on what Canadians aged 15 and older do with their time and what proportion of time is spent on work related activities, personal care, household maintenance and leisure pursuits. In addition to time use, detailed information on socioeconomic and demographic characteristics can be obtained from the 2005 GSS, making it a potentially valuable dataset for applied social research. Although the 2005 GSS includes over 19,000 respondents, only half the sample were asked whether they participated in a range of culture and sporting activities during the 12 months preceding the survey, and how often they experienced these activities. As a result, the final sample consisted of 9,851 individuals (4,255 males and 5,596 females).[5]

Our outcome of interest is how often an adult Canadian experienced each of the following culture activities during the 12 months preceding the 2005 GSS: attending theatrical performances; attending popular music performances; visiting historic sites; visiting conservation areas or nature parks; going to a public gallery or art museum; listening to music; going to a movie or drive-in; watching videos; reading books; reading magazines and using a library. As is typical with time use surveys, various measures were used to code participation levels. For instance, while book reading intensity was coded in five ordered categories (i.e., read a book a week; a month; every three months; every six months; and at least one a year), the frequency of using library services as a leisure activity was reported into three hierarchical categories (i.e., one to four times a year; five or more times, but not every month; and at least once every month).

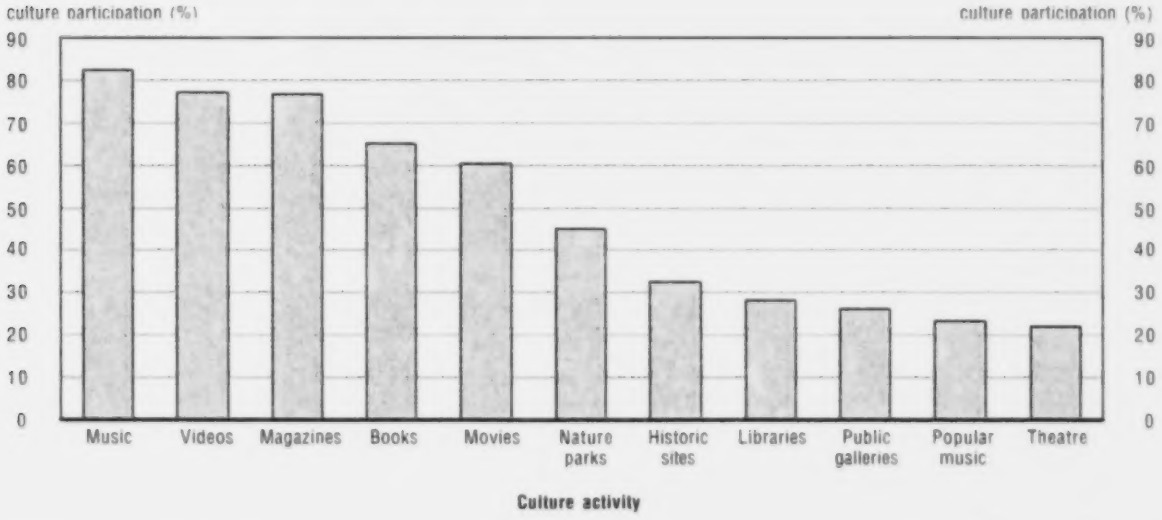
For ease of interpretation and coding uniformity, we use an approach similar to McCarthy et al. (2001) and McCarthy and Jinett (2001) and convert participation levels related to each activity into three ordered categories: never participating (i.e., category 1), participating only occasionally (i.e., category 2), and regular participation (i.e., category 3). In so doing, we also avoid cells with low frequency.[6] Lastly, we considered as missing data, subjects who failed to answer important questions such as whether they attended a given cultural activity and how often. As the amount of those missing values constituted anywhere from less that 0.5% to close to 3% of the remaining sample, they were simply removed from each variable.

2.2 Cross-tabular analysis

An examination of the distribution of culture participants (Table 4) indicates that one third of all Canadians 15 years of age or older were occasional visitors of at least one of the following during the year preceding the survey: conservation areas or nature parks (30%) and historic sites (28%). Meanwhile, about one-fifth of them were occasional participants in at least one of: theatrical performances (17%), popular music performances (19%), and public galleries or art museums (22%). At the same time, about 5% of adult Canadians were frequent audiences of at least one of: theatrical plays (5.1%), popular music (4.4%), historic sites (4.9%), and public galleries or art museums (4%).

Results reported in Table 4 also indicate that 38.4% of all adult Canadians were infrequent music listeners while 44% listened to music frequently. Six in ten adult Canadians were either occasional (28%) or frequent (32.4%) movie goers. About five in ten adult Canadians were occasional readers of books (50.4%) as a leisure activity, while slightly more than three in ten (35%) were occasional readers of magazines. By contrast, a higher percentage of the Canadian adult population were frequent readers of magazines (42%) as compared to books (14.4%) during the year prior to the survey. At the same time, only 13% of adult Canadians were occasional users of library services while 15.4% were frequent users. Chart 3 shows attendance rates across culture activities.

Chart 3
Participation in culture activities, Canada, 2005

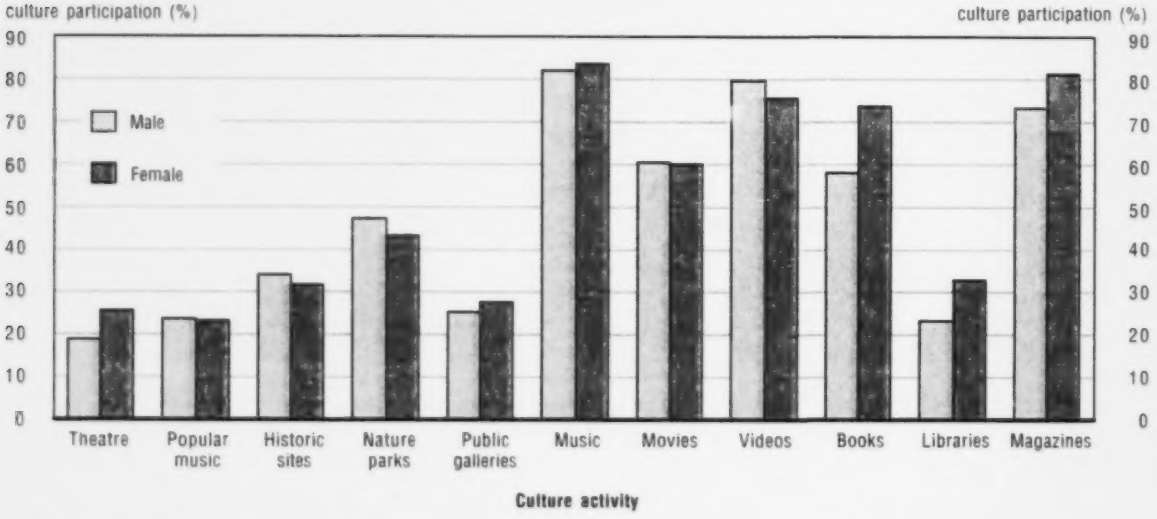


Source: Statistics Canada, 2005 General Social Survey.

Chart 3 shows that the highest participation levels were reported for listening to music (82.3%), watching videos (77.3%), reading magazines (76.8%), reading books (64.9%) and going to the movies (60.2%). Chart 3 also reveals that the lowest levels of participation were recorded for attendance at theatrical performances (22.2%) and popular music performances (23.4%). Given these low figures, studies of the social correlates of culture participation, which focus on participation in live performances (for example Fisher and Preece, 2003), are unlikely to be informative of culture consumption for the average Canadian adult population.

Irrespective of the discipline, descriptive statistics (Table 4) show that attendance rates generally increased with family income, with the highest difference occurring between adult individuals with family incomes $60,000 or higher versus those with family income under $30,000. Also, we note that adult Canadians possessing a university degree attended all culture activities in higher proportions than those with some secondary education or less. Further, descriptive statistics reported in Table 4 suggest that occasional and frequent participants generally had parents and a conjugal partner with high educational qualifications. Chart 4 shows rates of culture participation by gender and discipline.

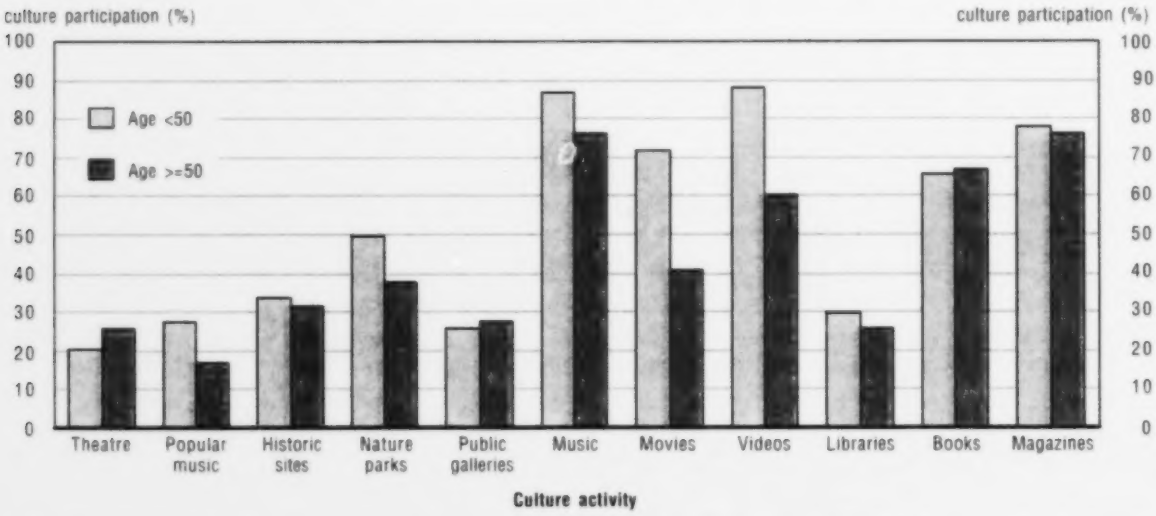
Chart 4
Participation in culture activities by sex, Canada, 2005



Source: Statistics Canada, 2005 General Social Survey.

As can be seen from Chart 4, attending theatrical performances, visiting public galleries and art museums, using library services, and reading books and magazines were all relatively more popular among women than men. Conversely, visits to historic sites, nature parks and conservation areas had a higher percentage of male participation, compared to women.

Chart 5
Participation in culture activities by age group, Canada, 2005



Source: Statistics Canada, 2005 General Social Survey.

The analysis of statistical information concerning participation by age group revealed two opposite patterns. On one hand, individuals aged 50 and over were overrepresented in audiences at theatrical performances, public galleries and art museums and for regular reading of books. On the other hand, they were underrepresented in attendance at popular music performances, movies and drive-ins, for frequent music listening and regular viewing of videos as a leisure activity.

2.3 Correlation analysis

Before presenting our estimation strategy, we pause to investigate the linear correlation between variables used in this paper. As all dependent variables and most explanatory variables are expressed in ordinal intervals, Kendall's rank correlations are reported in Table 5. First, we note that the number of times a person participated in each culture activity during the year prior to the survey was positively correlated with socioeconomic factors such as parents' education, household income, educational qualification and economic activity. By contrast, culture activity was negatively associated with marital status (married, living common-law and widowed).

The analysis of correlation statistics suggests that consumption of cultural activities such as going to movies or drive-ins, watching videos and listening to music were all negatively associated with age. Further, we observe a positive and significant relationship between participation across various cultural activities, suggesting that most disciplines selected in this study do not compete for audience. Lastly, a close study of relationships between explanatory variables indicated that our predictors do not suffer from multicollinearity bias.[7] In what follows, we explain the methodology used to estimate the social correlates of culture participation in Canada.

3. Statistical model

3.1 Estimation strategy

As data on participation levels are categorical and hierarchical, ordinary least-square and multinomial regression models provide biased estimates of the social correlates of culture participation since they all fail to utilize the ordering information of the response variable. In this context, our estimation strategy is the stereotype ordered regression (SOR) model proposed by Anderson (1984). The intuition behind the SOR model is that each interviewee (considered as a judge by Anderson) has stereotypes that characterize participation levels. Consequently, he or she analyzes each participation level and then chooses that level whose stereotype most correctly matches his or her views on the question being asked (Long and Freese, 2006).

Apart from capturing the ordinal and ordered nature of the dependent variable, the SOR model has an important advantage over alternative regression models for categorical dependent variables such as McCullagh's (1980) grouped continuous model and Fienberg's (1980) continuation-ratio model. It addresses issues such as whether two adjacent categories are essentially the same with respect to the covariates and whether an ordered relationship is appropriate (Greenwood and Farewell, 1988).

Our estimation strategy is also technically supported by two procedures of model selection. First, we tried the standard ordered logit model and applied the Brant (1990) test of parallel regression assumption. Second, we estimated the cumulative logistic model known to capture the hierarchical form of the dependent variable and we applied the score test. In results not shown, significant test statistics (i.e., Wald and score) provide evidence that the proportional odds assumption has been violated.[8]

The SOR model can be represented as:

$$\Pr(Y_i = y_q \mid X_i) = \frac{\exp(\alpha_q + \beta_q' X_i)}{\sum_{s=1}^{\kappa} \exp(\alpha_s + \beta_s' X_i)}, \quad q = 1, \ldots\ldots\ldots\ldots, \kappa \qquad (2.1)$$

Subject to:

$$\beta_q = \phi_q \beta \qquad (2.2)$$

$$\phi_1 = 1 \geq \phi_2 \geq \ldots\ldots\ldots \geq \phi_\kappa = 0 \qquad (2.3)$$

where X_i denotes the vector of explanatory variables; β denotes the effect parameters for the covariates; κ is the number of cut-points for the dependent variable(Y_i); α_q, α_s represent the constrained intercept parameters in the regression models;[9] and ϕ_q represents the scaling metric for the dependent variable.[10]

Condition (2.2) states that all explanatory variables other than the constant term do not necessarily have an equal effect across categories of the dependent variable. Statistically significant ϕs have two important implications. First, they imply that the ordering of the regression model is that suggested by the category definition. Second, they indicate that the effect of covariates upon the first odds ratio is greater than their effect on the second and so forth. Condition (2.3), which follows Anderson's (1984) recommendation, represents an additional order constraint that allows the model in (2.1) to be identifiable when using estimated values attributed to the response variable (Ananth and Kleinbaum, 1997). Under the SOR environment, a positive coefficient means that higher values for this covariate imply greater culture participation, *ceteris paribus*. Clearly, adults with this characteristic are more likely to report higher participation, in comparison with individuals without this characteristic, holding all other variables constant. The opposite interpretation is true with a negative coefficient.

3.2 Explanatory variables

In order to determine which socioeconomic and demographic factors are most important in explaining culture consumption in Canada, we explore a wide range of explanatory variables. First of all, we take into account variables such as household income, educational attainment and professional occupation that have been found to be statistically significant in past research (see Ateca-Amestoy, 2005; Borgonovi, 2004; Gray, 2003; Lewis and Seaman, 2004, Sturgis and Jackson, 2003). Moreover, sociologists, psychologists, marketing specialists as well as economists have all found that family background characteristics are major drivers of culture participation, whether activities take place inside or outside the home (see, for instance, Bourdieu, 1984; DiMaggio and Useem, 1978b; O'Hagan, 1996; Upright, 2004). Also, in order to capture the effect of a person's family socioeconomic situation on his or her level of culture consumption, we consider parents' schooling and conjugal partner's education.

We control for age since the regular consumption of culture commodities (such as theatre, public galleries or art museums and literature) requires the development of tastes which is a lifetime learning process (Gray, 2003; Lévy-Garboua and Montmarquette, 1996; McCain, 1995). Controlling for age also allows us to account for effects such as entrance in the labour market, ill health and lower mobility while explaining the observed heterogeneity in culture participation (Borgonovi, 2004).

Prior empirical evidence indicates that gender matters a great deal in culture participation. For instance, Gray (2003) showed that American females were more likely than their male counterparts to attend artistic events such as classical music, opera, musical theatre, theatre, ballet and museums. Likewise, in a comparative analysis on arts participation in the United States, DiMaggio and Mukhtar (2004) noted that the overrepresentation of women persists in all culture activities and even rises over time. Following this stream of literature, we control for gender.

We control for further heterogeneity underlying culture consumption by utilizing the statistical information from two variables representing the number of young children at home aged 0 to 4 and 5 to 12, respectively. As culture participation is generally time-intensive, controlling for the number of young children at home is

of interest as it allows us to capture the availability of people's leisure time. We can reasonably think that young children in the household could make it more likely that individuals will be spending more time in household maintenance and family care. This in turn could lower the time available for personal leisure pursuits. Arguably therefore, we expect participation in most culture activities, and especially in those which occur outside the home, to decrease with the number of young children at home, *ceteris paribus*.

Similarly, four dummy variables are included to represent marital status of the respondent (i.e., married, living common-law, widowed and single, with divorced or separated serving as reference category). These variables allow us to capture the importance that living arrangements have on the behaviour of culture participants. We expect married individuals and people living common-law to be less likely than divorced or separated individuals to belong to audiences of most culture activities because the presence of a conjugal partner is likely to impose additional constraints on preferences and choice sets (Ateca-Amestoy, 2005; Upright, 2004).

In order to take into account the opportunity cost of time, we control for the labour status of the respondent during the year preceding the survey through two dummy variables: self-employment and permanent employment. All things remaining equal, we reasonably expect permanent workers to be less likely than temporary workers or students to have a high availability of leisure time.

Following past research, our analysis also includes four dummy variables representing geographic location (i.e., Atlantic Canada, Quebec, Prairies and British Columbia, with Ontario acting as reference category) and one binary variable indicating whether a person is an urban area resident or not. All these variables allow us to account for contextual factors and other omitted variables. As an example, we expect urban area residents to be more likely than rural ones to visit public galleries and art museums on a frequent basis because the existence of threshold market sizes makes it less likely that small areas will be housing major culture activities such as theatre, public galleries or art museums (Gray, 2003). The province of Quebec is one of Canada's most populous provinces and is home to a large number of non-profit performing arts organizations.[11] These two elements lead us to conjecture, *a priori*, that Quebecers will be more likely to belong to audiences of several artistic events.

4. Socioeconomic attributes of culture consumers in Canada

In order to get an idea of the importance of the relationship between participation levels and socioeconomic characteristics of adult Canadians, we choose to look at marginal effects (i.e., the change in predicted probability associated with the changes in the explanatory variables) rather than simply analysing raw parameter estimates.[12] In tables 6 and 7, two series of marginal probabilities obtained from our stereotype ordered logistic models are thus reported for each culture activity: (i) changes in the probability to attend occasionally (column I); and (ii) changes in the probability to do so as a regular attendee (column II).[13] We discuss our findings separately for each of our eleven culture activities in order to highlight the important background factors for each.

4.1 Theatrical performances

Compared to the average adult male, the average adult female is 5.5% more likely to attend occasionally and 2% more likely to do so as a frequent theatregoer, with other variables being held at their average. The idea that women are more likely to predominate in audiences at theatrical performances has also been supported by various studies (see, for instance, Ateca-Amestoy, 2005; Gray, 2003; Montgomery and Robinson, 2005).

Having parents with higher levels of educational attainment increases the likelihood of being a regular theatregoer, as does having a partner or spouse possessing an advanced qualification. Also, it appears that the effect of a partner's education is more important than that of parents in that the impact of a conjugal partner's education exceeds that of a father's educational attainment by 57% for occasional attendance and 63% for regular attendance. Similarly, it exceeds the influence of a mother's education for infrequent and frequent theatregoing by 31% and 33%, respectively. It is also worth noting that the importance of a mother's education surpasses that of a father's education by 44% for occasional attendance at theatrical performances and by 50% for regular attendance at theatrical performances.

In line with past research, it was expected that the higher the household level of income the more an adult individual would attend theatrical performances. This effect was found to be important at both levels of attendance: higher levels of household earnings lead to both a higher predicted likelihood of attending occasionally and regularly. Attendance also rises with professional occupation. For instance, compared to being unemployed or in occupations related to primary industry, processing or manufacturing, being in management, business, finance or administrative occupations increases the probability of being an occasional attendee by 8.8% and regular attendee by 3.7%. Interestingly, we note that employees in the latter occupational category are more likely to show the strongest taste for theatrical performances in Canada.

Age increases the predicted probability that people will attend theatrical performances relatively infrequently and on a more regular basis. Singles are more likely than separated or divorced people to attend theatrical performances. The opposite is true of being married or living in a common-law marriage, compared to being divorced or separated. At the same time, the higher the number of children aged 0 to 12, the lower the chances of being an occasional or a regular attendee at theatrical performances.

4.2 Popular music performances

Several personal characteristics, including family income, education and occupation, emerge as significant determinants of increased participation in popular music performances. Concerning specifically the effect of economic activity, our estimates show that being in a management, business, finance or administrative occupation has the highest incremental effect on the likelihood of participating occasionally and of being a regular participant, compared to being unemployed or having an occupation unique to primary industry, processing and manufacturing.

Attendance at popular music performances is also more likely to be common among people with more highly educated family backgrounds and among those having a conjugal partner with a tertiary qualification. But the probability of attending rises more with a rise in the conjugal partner's education than with a rise in parents' educational attainments; and rises more with increases in the mother's education than with increases in the father's education, regardless of how often people are likely to experience this culture activity. People who are married, widowed or living common-law are less likely, and those who are single are more likely, to attend occasionally and to do so frequently than individuals who are divorced or separated. Attendance at popular music performances decreases with age and the number of young children at home. City-dwellers are more likely than residents of small towns to participate in this activity. Regionally, Quebecers, British Columbians and individuals who live in the Prairies are more likely than Ontario residents to be frequent attendees

4.3 Historic sites

Men are more likely than women to visit historic sites, with the effect stronger for occasional visits. Our results also indicate that family income is an important factor in going to historic sites, with adult Canadians living in higher income households being most likely to participate in this culture activity, either occasionally or regularly. Further, people who are employed are more likely than others to regularly visit historic places. However, workers in occupations such as natural and applied sciences, health, social sciences and education are most likely to visit historic sites occasionally and to do so as regular visitors.

With advanced educational qualifications and parents with higher levels of educational attainment comes an increased likelihood of visiting historic sites occasionally and frequently, as does having a partner or spouse with a higher level of educational attainment. Being self-employed, rather than working fixed hours, also increased the likelihood of visiting historic sites. While the positive effect that

a partner's education has on the likelihood of undertaking this culture activity is smaller than that of a mother's educational attainment, it surpasses the influence of a father's education, regardless of frequency of visit.

Visiting historic sites is less likely to be common among people who are married, widowed, single or living common-law, in comparison with individuals who are separated or divorced. Moreover, the fewer children aged 0 to 12 in the household, the greater the likelihood of occasional and regular visits to historic sites. Urban area residents are less likely than rural ones to contribute to higher attendance at this culture activity. Concerning regional location, residents of Atlantic Canada are more likely than Ontario residents to be occasional and regular goers to historic sites. Using Ontario as the comparison region, we also find that Quebecers, British Columbians and residents of the Prairies are more likely to experience this culture activity.

4.4 Conservation areas and nature parks

Adult males are more likely to be occasional and regular goers to conservation areas or nature parks than adult females. As hypothesized, participation is more likely to be popular among individuals with an advanced qualification, among those living in high income households, among those having families with higher levels of educational attainment, and among those whose partner or spouse has a higher level of educational attainment. All these effects are found in both levels of participation (i.e., occasional and regular). Also, our results indicate that the impact of a conjugal spouse's educational attainment surpasses that of a father's educational attainment by 44.4% for occasional visits and by 87.5% for regular visits. It also beats the importance of a mother's education by 33%, regardless of the visit frequency. In the meantime, the effect of the mother's education overrides that of the father's education by 17% for occasional visits and by 20% for regular visits.

Regardless of the professional occupation, being employed is positively associated with higher frequency visits. However, employees in occupations such as natural and applied sciences, health, social sciences and education are most likely to visit conservation areas or nature parks. All else remaining equal, the marginal probability of going to conservation areas and nature parks on an occasional basis and that of doing so regularly are all higher for self-employed people than for adult Canadians who work fixed hours. Individuals living with more children aged 0 to 12 are more likely to be occasional and regular goers to conservation areas or nature parks. In addition, our multivariate analysis shows that being married decreases the likelihood of going to conservation areas or nature parks occasionally and regularly, as does living common-law, being widowed and being single, compared to being separated and being divorced. Urban area residents are less likely than residents of rural areas to visit conservation areas and parks occasionally and frequently. Lastly, adults who reside in Atlantic Canada, Quebec and the Prairies are less likely than Ontario residents to participate occasionally in this culture activity and to do so as regular participants. The opposite holds for British Columbians, compared to individuals residing in Ontario.

4.5 Public galleries and art museums

There is a gendered dimension to the number of times adult Canadians are likely to visit public galleries and art museums: women are more likely than men to visit occasionally and to do so as regular visitors. However, the association between visiting and gender is not as strong as that cited for theatrical performances. Frequency of visits also increases with age, supporting the idea that individual tastes for "traditional" culture activities such as visiting public galleries and museums are developed through the learning-by-consuming process (McCain, 1995). We noted that people living in a household with children aged 0 to 12 are less inclined to go occasionally and to do so as frequent goers, indicating that the presence of young children at home may put a constraint on the amount of time people may be willing to spend in leisure activities outside the home, such as visiting public galleries or art museums.

In general, it was expected that individuals possessing higher levels of educational attainment and having higher household income would participate more. Our findings confirmed this since we found that museum visitors in Canada are more likely to belong to higher income categories and to have higher levels of education. Past research also finds a positive and significant influence of people's educational attainment on their consumption of museums (DiMaggio, 1991; Frey and Meier, 2003). People whose mother and father possess tertiary qualifications and who also have highly educated conjugal partners are most likely to visit museums occasionally and regularly. However, a partner's credentials have a more influential effect than parents' education. We also found that labour force participation and type of profession have positive and statistically significant effects on the number of times people visit museums or public galleries in Canada.

With respect to the type of profession, our estimates suggest that employees in occupations that include natural and applied sciences, health, education and social sciences are more likely to visit public galleries and art museums, in comparison with people who are unemployed or have an occupation unique to primary industry, processing and manufacturing. Regardless of the frequency of visits, people who have permanent jobs are less likely than those with temporary jobs to participate in this culture activity. In contrast, being self-employed raises the predicted probability of visiting public galleries or art museums, in comparison with having fixed working hours. Interestingly, this result challenges Frey and Meier's (2003) claim that because the opportunity cost of time for self-employed individuals is higher in comparison with people of fixed working hours, the latter are predisposed to visit museums more often, all else remaining equal. Our result may thus be interpreted somewhat differently: as participation in this culture activity is time-consuming, having more control over their work schedule may give self-employed people more opportunity to visit museums.

Concerning the effect that marital status has on frequency of visits, we note that married persons, widowed individuals and people living in common-law marriages are less inclined than separated or divorced people to participate occasionally or frequently. The opposite is true for singles. As expected, urban residents are more likely than rural ones to visit museums. Regionally, Ontario residents are less likely than Quebecers and British Columbians, and more likely than residents of Atlantic Canada and people who reside in the Prairies to visit public galleries or art museums occasionally and to do so as regular visitors.

4.6 Music listening

Our results reveal a more complex gender effect for music listening in Canada. Men are more likely than women to be occasional listeners. But, when women listen, they are more likely than men to be regular listeners. There are a number of other results which are worth highlighting. For instance, regular music listening increases when household income, educational qualifications or a conjugal partner's education rises. Conversely, it decreases with age or in the presence of dependent children at home. Additionally, we found that higher levels of parental education raises the predicted probability that an individual will listen to music regularly. However, we found that the effect of the father's qualification exceeds that of the mother's education by 83% for regular music listening.

Being married increases the likelihood of listening occasionally and decreases the probability of listening regularly, as does being widowed or living common-law, in comparison with being separated or divorced. Lastly, Quebecers, British Columbians, Atlantic Canadians and people who reside in the Prairies are less likely than Ontario residents to be infrequent music listeners. However, when they listen to music, they are more likely than Ontario residents to be frequent listeners.

4.7 Movies and drive-ins

The results of our multivariate analysis suggest that household income and educational attainment all significantly increase the likelihood that an individual will regularly go to movies or drive-ins. Also, we find that Canada's regular moviegoers are more likely to be young city dwellers in comparison with residents of small towns. These results are very close to those of Fernández-Blanco, Prieto-Rodríguez and Oreo Sanchez (2004) for Spain, and Montgomery and Robinson (2005) for the United States, indicating a similar education and income effect across countries. Our estimates would thus suggest that, with respect to education and household earnings, the consumption of movies or drive-ins among the Canadian adult population is not too different from what was noted abroad, all else held equal. Permanent workers are, on average, less likely than temporary workers and students to go to movies or drive-ins. At the same time, self-employed individuals are, on average, more likely than individuals working fixed hours to participate in this cultural activity. Concerning professional occupation, occasional and regular goers to movies or drive-ins are most likely to work in occupations such as management, business, finance and administration.

The higher the level of educational attainment of one's partner or spouse, the more likely he or she will go to movies or drive-ins and do so regularly. Likewise, having a family with a higher level of educational attainment significantly increases the predicted probability of belonging to movie audiences. However, the influence of a conjugal partner's educational attainment exceeds that of the father's education by 40% for occasional participation and by 33% for regular participation. It also dominates the importance of the mother's education by 40% for infrequent attendance and by 85% for frequent attendance. In the meantime, the effect of the father's education statistically equals that of the mother's education for the probability of going occasionally, but the former overrides the latter by 23% for the probability of being a regular moviegoer.

More children aged 0 to 12 at home decreases the predicted probability of attending a movie or drive-in occasionally as well as regularly. This result coincides with past research by Montgomery and Robinson (2005) using data from the United States, which showed a consistent and negative relationship between the number of dependent children at home and the chances of belonging to movie audiences. Differences concerning the consumption of movies or drive-ins are also observed across marital status: being married or living common-law reduces the predicted probability of being an occasional or frequent goer, while being single or widowed raises the probability of participation in these activities, in comparison with being separated or divorced. Lastly, using Ontario as the province of comparison, our results indicate that Quebecers, Atlantic Canadians, British Columbians and individuals living in the Prairies are more likely to belong to movie audiences.

4.8 Video viewing

In terms of gender, our estimates provide some evidence suggesting that men are more likely than women to be regular viewers of videos. Also, the higher the level of educational attainment, the more likely an adult Canadian will view videos occasionally and do so regularly. Likewise, our results suggest that one additional level of father, mother or conjugal partner schooling has a positive impact on the number of times people will view videos during a year. But the influence of a spouse or partner's credentials exceeds, on average, that of parents' education, regardless of the degree of consumption of this culture commodity. For instance, the effect of a spouse's qualification surpasses that of the father's education for occasional viewing (by 33%) and for regular viewing (by 17%).

Age has a negative marginal effect on the probability of viewing videos occasionally or regularly. City-dwellers, individuals belonging to higher income households and people living with more children aged 5 to 12 are most likely, while individuals living with more children aged 0 to 4 are less likely to be occasional and regular viewers of videos. Employees in artistic, culture, recreation, sports, sales and services occupations are most likely to be the highest consumers of videos. With respect to marital status, individuals who are separated or divorced are more likely than married people or singles and less likely than individuals who are widowed to view videos occasionally or regularly. Our results indicate that regular video viewing is more likely to be an urban phenomenon. Meanwhile, Quebecers are less likely than Ontario residents to watch videos on a regular basis. By contrast, Atlantic Canadians, British Columbians and people living in the Prairies are more likely than Ontario residents to engage in this activity occasionally and to do so regularly.

4.9 Reading books

Gender has a greater impact on reading books as a leisure activity, irrespective of intensity: compared to the average adult male, the average adult female is 12% more likely to read a book occasionally and 6% more likely to do so as a frequent reader, with other variables being held at their average. In addition, possessing a more advanced qualification or being in a higher income household increases reading intensity. The importance that household income has for book consumption has also been found in previous research (see, for instance, Hjorth-Andersen, 2000; Fishwick and Fitzsimons, 1998; Prieto-Rodríguez, Romero-Jordán and Sanz-sanz,

2004; Ringstad and Løland, 2006). Most relevant is the study by Ringstad and Løland (2006), who rely on statistical information collected during 14 years for more than 18,000 Norwegian households. They found that households with high incomes are about five times more likely to read books than households with low incomes.

Our results indicate that age is another characteristic that is positively associated with the reading of books for leisure. Further, living in an urban area or being self-employed increases the probability of reading occasionally and regularly. While employees in occupations that include natural and applied sciences, health, education and social sciences are most likely to be the highest consumers of books for leisure, it is interesting to notice that workers in artistic, culture, recreation, sport, sales and services occupations are all less likely than unemployed persons or people having occupations unique to primary industry or occupations unique to processing and manufacturing to read books for leisure, regardless of frequency.

In terms of parental education, one additional level of mother or father's schooling increases the predicted probability that an adult Canadian will read books occasionally or regularly, as does one additional level of a conjugal partner's education. However, the effect of a partner's educational qualification surpasses that of a mother's education by 16% for infrequent reading of books and by 17% for frequent reading of books. Likewise, the effect of a spouse's education dominates that of a father's qualification by 75%, irrespective of intensity. Concerning marital status, our results suggest that married individuals, widowed people and those living common-law are less likely, and singles are more likely than separated and divorced persons to be frequent readers. Regionally, British Columbians are more likely, and Quebecers are less likely than Ontario residents to be frequent readers.

4.10 Library use

In terms of marginal effects, the average adult female is 3.5% more likely than the average adult male to use libraries occasionally and 6% more likely to do so as a frequent user, with other variables being held at their average. As might be expected, the predicted likelihood of using libraries infrequently and of doing so frequently are positively related to level of educational attainment and family income. Also, frequent users are most likely to be young, to live in households with few children aged 0 to 4, with more children aged 5 to 12 and to belong to a higher income bracket.

Having parents with tertiary qualifications increases library use as does having a highly educated spouse or partner. While an individual's social capital appears to have a greater impact on how often he will use library facilities, it must be noted that the influence of a conjugal partner's education exceeds that of a father's education by 77% for occasional use and by 75% for regular use. However, the effect of a high level of father's education on the probability of being an occasional or regular library user is just as statistically likely as that of a high level of mother's education.

Work status is also important: our multivariate analysis indicates that permanent workers are less likely than temporary ones or students to be devoted consumers of library facilities. In addition, our estimates indicate that unemployed individuals, workers in occupations unique to primary industry, processing and manufacturing

are most likely to use libraries, irrespective of intensity. Moreover, relationship status continues to be a significant factor with single Canadians more likely than divorced or separated individuals to visit libraries, while the opposite is true for those in married or common-law relationships; the latter are less likely than the divorced/separated population to visit libraries.

4.11 Magazine reading

Our estimates suggest a significant difference between the sexes when it comes to magazine reading: women are more likely than men to be occasional or regular readers. People who have higher levels of educational attainment and those who live in high income households are more likely than others to consume magazines on a regular basis. Also, low levels of interest in magazine consumption are more likely to be observed among adult Canadians living with children aged 0 to 12.

In terms of parent and conjugal partner education, an additional level of father, mother or spouse's schooling has a positive influence on the odds of reading magazines, regardless of the frequency. Further, regular readers of magazines are most likely to be self-employed, to work in occupations such as management, business, finance and administration. Unlike Escardíbul and Villaroya (2007) who noted that in Spain, regular consumers of magazines were more likely to be older, we find that age has a neutral effect on the odds of reading magazines. Lastly, when it comes to the effect of geographic location, we find that Quebecers and Atlantic residents are less likely and British Columbians and Prairies residents are more likely to be regular readers of magazines, in comparison with Ontario residents.

5. Discussion and concluding remarks

We used the culture supplement to the 2005 GSS to examine the main socioeconomic factors that might influence participation in selected culture activities. In line with past empirical research, our multivariate analysis showed that household income is an important positive covariate of participation, regardless of the activity. Similarly, we provided evidence suggesting that a person's educational attainment is highly associated with his or her level of culture participation, whether activities take place at home or in a public venue. Also, we found that people whose parents have advanced educational qualifications are significantly more likely than those whose parents have lower educational attainment to attend most culture activities. However, our results indicated that the impact of the mother's educational qualifications exceeded that of the father's for attendance at, or participation in, most activities.

Among all culture activities analyzed, we found that the educational qualification of an individual's conjugal partner is positively associated with higher participation in culture events of all kinds. It is worth noting that for most selected culture activities, the importance of the conjugal partner's education surpassed that of a parent's level of education, regardless of the participation level. This finding is consistent with Upright (2004) who showed that in the United States, a spouse's background has a positive and strong influence on people's arts participation comparable to their own characteristics and that this effect remained even net of their spouse's own participation. We noted that age plays an influential role when it comes to attendance at theatrical performances, historic sites and public galleries and art museums. This result is in line with other works which uncovered similar age-based differentials (see, for instance, DiMaggio and Ostrower 2004; Montgomery and Robinson, 2005). In contrast, we found that the likelihood of attending popular music performances, going to parks or conservation areas, going regularly to movies, using library facilities frequently or viewing videos more often decreases with age. However, age has a neutral effect on the predicted odds of reading magazines, regardless of reading frequency.

Moreover, in terms of a gender effect, women are more likely than men to be regular consumers of theatrical performances, popular music performances, public galleries and art museums, books, libraries and magazines. Collins (1992, 1998) argued that due to their prominence in cultural production occupations such as journalists, teachers, artists and performers, women are most likely to be the majority audience members at most culture events. Our study showed, however, that men are more likely than women to frequently view videos, and to regularly visit historic sites, nature parks and conservation areas. In addition, regional location appeared as a significant determinant of the level of consumption of most culture commodities. For example, Quebecers and residents of Atlantic Canada are less likely, and British Columbians are more likely to be regular readers of magazines, in comparison with Ontario residents. Quebecers are also less likely than Ontario residents to watch

videos on a regular basis. By contrast, residents of the Prairies are more likely than Ontario residents to engage in this activity occasionally and to do so regularly.

The other determinants of the degree of culture consumption in Canada are in line with the empirical literature. For instance, people living with young children, and those who are married, widowed or living in common-law relationships (compared to people who are divorced or separated) are less likely to be found in culture audiences. At the same time, occupation, not household income or educational attainment, is the dominant social correlate of participation in activities such as theatrical performances, popular music performances, and visiting public galleries, art museums and historic sites.

Several socioeconomic and demographic characteristics are generally interlinked. For instance, people who stay longer in the education system generally earn higher incomes, are more likely to be employed and tend not to be in the youngest and the oldest age groups. Also, a higher income might imply a release for more time for leisure pursuits. But the increased opportunity cost of leisure time might give rise to supplementary work effort, causing people to substitute work for culture participation. Although descriptive studies may show how culture participation differs by personal and family factors, they may not be able to determine the key factors. A major contribution of this study is to use advanced multivariate techniques in order to determine which socioeconomic and demographic attributes are most important in explaining culture participation in Canada.

More research needs to be conducted, since many important issues remain unresolved. The most importunate of these questions pertains to the type of cultural commodities mostly consumed by lower income individuals and people who have lower educational attainment. Identifying the forms of cultural interaction and consumption enjoyed by these individuals can lead to a tangible growth in the number of culture consumers and substantially aid the economic viability of the culture sector in the long run.

References

Ananth, C.V. and Kleinbaum, D.G. (1997), "Regression Models for Ordinal Responses: A Review of Methods and Applications," *International Journal of Epidemiology*, 26(6), pp. 1323-33.

Anderson, J.A. (1984), "Regression and ordered categorical variables," *Journal of the Royal Statistical Society*, Series B (Methodological), 46(1), pp. 1-30.

Ateca-Amestoy, V.M. (2005), "Determining Heterogeneous Behaviour for Theatre Participation," IESA working paper No 0502.

Baumol, W.J. and W.G. Bowen (1966), *Performing Arts: The Economic Dilemma*. Twentieth Century Fund, New York.

Bergonzi, L. and Smith, J. (1996), "Effects of Arts Education on Participation in the arts," Washington, D.C., National Endowment for the Arts.

Besley, D., Kuh, E., and Welsch, R. (1980), *Regression diagnostics: Identifying influential data and source of collinearity*. New York: Wiley.

Book, S.H. and S. Globerman (1975), *The Audience for the Performing Arts*, Ontario Council, Toronto.

Borgonovi, F. (2004), "Performing Arts: an economic approach," Applied *Economics*, 36, pp. 1871-85.

Bourdieu, P. (1984). *Distinction: A Social Critique of the Judgement of Taste*. Rutledge, London.

Bourdeau, J.P. (2002), Bowling Along: Cross-Indicators of Social Participation and Local Community Belonging in Canada, Strategic Research and Analysis Paper No SRA-672, Department of Canadian Heritage.

Brant, R. (1990), "Assessing Proportionality in the Proportional Odds Model for Ordinal Logistic Regression," *Biometrics*, 46, pp. 1171-78.

Canada Council for the Arts (2002), Overview of Key Demographic Trends—Possible Impact on Canadian Arts Attendance.

Canada Council for the Arts (2001), Research Report on Large Performing Arts Organizations.

Canada Council for the Arts (1999), Performing Arts Companies Funded by the Canada Council: 10 Year Audience Trend. Arts Sector Profile #3.

Collins, R. (1998), "Women and men in the class structure," *Journal of Family Issues*, 9(1), pp. 27-50.

Collins, R. (1992), *Women and the production of status cultures*. In: Lamont, M. and M. Fournier (eds.).

Culture Statistics Program (2004), *Canadian Framework for Culture Statistics*, Culture, Tourism and the Centre for Education Statistics Research Paper Series. 81-595-MIE200421, Ottawa, Statistics Canada.

DiMaggio, P. and T. Mukhtar (2004), "Arts Participation as Cultural capital in the United States, 1982-2002: Signs of Decline?," *Poetics* 32:169-194.

DiMaggio, P.J. (1991), "The museum and the public." In the Economic of Arts Museums, Feldstein, M. (eds), University of Chicago Press, Chicago pp. 39-50.

DiMaggio, P.J. and Useem, M. (1978b), "Social class and Arts Consumption: The Origin of Class Differences in Exposure to the Arts in America," *Theory and Society*, 5:141-161.

Escardíbul, J.O. and Villaroya, A. (2007), "Who pays for newspapers and magazines in Spain?," paper presented at the 9th AIMAC Conference, Universidad De Valencia, 8-11 July.

Environics Research Group Limited (2000). *Arts and Heritage Participation Survey Final Report*. Document Prepared for the Department of Canadian Heritage.

Fernández-Blanco, V. Prieto-Rodríguez, J. and Orea-Sánchez, L. (2004), "Movie enthusiasts versus cinemagoers in Spain: A Latent Class Model Approach," presented at the 13th ACEI Conference, University of Illinois at Chicago.

Fienberg, S.E. (1980), *The Analysis of Cross-Classified Categorical Data*. MIT Press, Cambridge, Mass.

Fisher, C.G. and S.B. Preece (2003), "Evolution, Extinction, or Status Quo? Canadian Performing Arts Audiences in the 1990s," *Poetics* 31:69-86.

Fishwick, F. and Fitzsimons, S. (1998), *Report into the effects of the abandonment of the net book agreement*. Book Trust, London.

Frey, S.B. and Meier, S. (2003), "The Economics of Museums," in Handbook for Economic of Art and Culture. Ginsburg and Throsby (eds). Elsevier.

Gray, C. (2003). "Participation," in Ruth Towse (eds), A Handbook of Cultural Economics, Edward Elgar Publishing.

Greenwood, C. and Farewell, V. (1988), "A Comparison of Regression Models for Ordinal Data in Analysis of Transplanted-Kidney Function," *the Canadian Journal of Statistics, 16(4)*, pp. 325-335.

Hjorth-Andersen, C. (2000), "A Model of Danish Book market," *Journal of Cultural Economics*, 24, pp. 27-43.

Kracman, K. (1996), "The Effect of School-Based Arts Instruction on Attendance at Museum and the Performing Arts," Poetics, 24, pp. 203-218.

Lévy-Garboua, L. and Montmarquette, C. (1996), "A Microeconometric Study of Theatre Demand," *Journal of Cultural Economics*, 20, pp. 25-50.

Lewis, G.B. and Seaman, B.A. (2004) "Sexual Orientation and Demand for the Arts," *Social Science Quarterly*, 85(3), pp. 523-38.

Long, S.J. and Freese, J. (2006), *Regression Models for categorical Dependent Variables Using Stata*, Second Edition. Stata Press, College Station, Texas

McCain, R.A. (1995), "Cultivation of Taste and Bounded Rationality: Some Computer Simulations," *Journal of Cultural Economics, 11*, pp. 1-21.

McCarthy, K., and Jinett, K. (2001), *A New Framework for Building Participation in the Arts*. Santa Mónica, CA: RAND, MR-1323-WRDF.

McCarthy, K., Elizabeth E. Ondaatje and Lauras Zacharas (2001), *Guide to the Literature on Participation in the Arts*. Santa Mónica, CA: RAND, DRU-2308-WRDF.

McCullagh, P. (1980), "Regression models for ordinal data (with discussion)," Journal *of the Royal Statistical Society, Series B, 42*, pp. 109-142.

Montgomery S.S. and Robinson, M.D. (2005), "Take Me Out to the Opera: Are Sports and Arts Complements? Evidence from the Performing Arts Research Coalition Data," paper presented at the *8th International Conference on Arts and Cultural Management* (AIMAC), Montreal, July 3-6.

Ogrodnik, L. (2000), "Patterns in Culture Consumption and Participation," Statistics Canada's Culture Statistics Program.

O'Hagan, J. (1996) "Access to and Participation in the Arts: the Case of Those with Low Income Educational Attainment," *Journal of Cultural Economics*, 20(4), pp. 269-282.

Prieto-Rodríguez, J., Romero-Jordán, D. and Sanz-sanz, J.F. (2004), "Is a tax on cultural goods consumption actually desirable? A microsimulation analysis applied to Spain," paper presented at the *AEA Conference on the Econometrics for Cultural Goods*, April, 22-23.

Ringstad, V. and Løland, K. (2006), "The demand for books estimated by means of consumers survey data," *Journal of Cultural Economics*, 30, pp.141-155.

Seaman, B.A. (2005), "Attendance and Public Participation in the Performing Arts: A Review of the Empirical literature," Working paper No 05-03, Andrew Young School of Policy Study, Georgia State University.

Statistics Canada (2001), 1998/99 Performing Arts Survey.

Sturgis, P. and Jonathan, Jackson (2003), "Examining participation in sporting and cultural activities: Analysis of the UK 2000 Time Use Survey Phase 2," mimeo, University of Surrey and London School of Economics.

Upright, C.B. (2004), "Social capital and spousal participation: spousal influences on attendance at arts events," *Poetics 32*, pp. 129-143.

Van Berkel, M. and De Graaf, N.D. (1995), "Husband's and Wife's Culture participation and Their levels of Education: A Case of Male Dominance?," *Acta Sociologica, 38*, pp. 131-149.

Endnotes

1. This study uses the definition of culture and culture activities established in the *Canadian Framework for Culture Statistics*.
2. Literature searches were carried out during autumn 2006 and winter 2007 using various combinations of search words in a number of different research databases. We noted that past Canadian research on culture participation is essentially composed of survey studies which describe the socioeconomic and demographic characteristics of culture participants (see, for instance, The Heritage and Arts final report, 2000; reports from Canada Council for the Arts, 1999; 2001; 2002; and Ogrodnick, 2000). Although studies of this kind may show how culture participation differs by personal and family factors, they may not be able to determine the key factors. The two exceptions, which we mention, are Bourdeau (2002), and Fisher and Preece (2003) who conducted multivariate analyses for selected culture activities to determine which socioeconomic attributes mostly contribute in the explanation of culture attendance.
3. In addition, since Fisher and Preece (2003) did not rely on population-weighted estimates to study the social correlates of participation in musical activities in Canada, they cannot verify if their results are robust to population weights.
4. We use Bourdieu (1984) to measure a person's social capital by his or her family background, i.e., parents schooling.
5. Detailed information concerning this survey is available upon request at Statistics Canada's Social and Aboriginal Statistics Division.
6. All details concerning the recoding of each response variable and other variables derived from the 2005 GSS to model culture participation are listed in Tables 1 and 2 in the Appendix.
7. But, in order to rigorously gauge the impact potential near dependencies may have on the estimation of the standard error of the estimate of the regression parameters, we also performed the variance inflation factors (VIF) test in tables not shown. The general rule for the VIF test is that the VIF should not exceed 10 (Belsley, Kuh and Welsch, 1980). As the largest VIF obtained was 4.7, we concluded once more that none of our econometric models has been deteriorated by collinearity.
8. The proportional odds assumption assumes that all explanatory variables other than the constant terms have an equal effect on the odds of crossing the threshold between never participating and participating only occasionally and the threshold between participating only occasionally and participating regularly or frequently.
9. The SOR model generates (κ-1) standard multinomial intercept parameters for the y-response, (κ-2) independent $\varnothing$s and a single β parameter for each explanatory variable.
10. This scaling parameter denotes the distance between the outcome levels in terms of the linear prediction $\varnothing_q \beta X_j$.
11. According to Statistics Canada' 1998/99 Performing Arts Survey, four provinces have the largest number of non-profit performing arts organizations in Canada: Quebec (226); Ontario (210), British Columbia (70) and Alberta (42).
12. As model coefficients are invariant to centering of first order terms, marginal effects are calculated by centering all continuous independent variables at their means. The reader should thus interpret marginal effects as the change in predicted probability associated with percent changes in the continuous independent variables. Also, we calculated the marginal effect of a dummy variable as the discrete change in the dependent variable as the dummy variable changes from 0 to 1. Under this specification, therefore, marginal probabilities should be interpreted as indicating how much the baseline probability to participate in a given cultural activity varies with each unit change in the corresponding explanatory variable, holding all other variables constant.
13. We note that the values of $\varnothing$'s are all distinct with 99% level of statistical significance. Moreover, the ability of our model to predict culture participation is greater than would be expected by chance since χ-squared is statistically significant for each equation.

Appendix

Table 1

Summary significances, multivariate results

	Theatre	Popular	Historic	Parks	Galleries	Music	Movies	Videos	Books	Libraries	Magazines
Female	+	+	-	-	+	+	+	-	+	+	+
Number of children aged 0 to 4 at home	-	-	-	+	-	-	-	-	-	-	-
Number of children aged 5 to 12 at home	-	-	-	+	-	-	-	+	-	+	-
Age group of the respondent	+	-	+	-	+	-	-	-	+	-	n.s.
Total household income	+	+	+	+	+	+	+	+	+	+	+
Highest level of education obtained by the respondent	+	+	+	+	+	+	+	+	+	+	+
Highest level of education obtained by respondent's spouse or partner	+	+	+	+	+	+	+	+	+	+	+
Highest level of education obtained by respondent's father	+	+	+	+	+	+	+	+	+	+	+
Highest level of education obtained by respondent's mother	+	+	+	+	+	+	+	+	+	+	+
The respondent is married	-	-	-	-	-	-	-	-	-	-	n.s.
The respondent lives common-law	-	-	-	-	-	-	-	n.s.	-	-	-
The respondent is widowed	-	-	-	-	-	-	+	+	-	n.s.	+
The respondent is single and never married	+	+	-	-	+	n.s.	+	-	+	+	+
The respondent works in an occupation in management, business, finance or administration	+	+	+	+	+	+	+	+	+	-	+
The respondent works in an occupation in natural and applied sciences, health, social sciences or education	+	+	+	+	+	+	+	+	+	-	n.s.
The respondent works in an occupation in arts, culture, recreation, sports, sales and services, trades, or transport and equipment	+	+	+	+	+	+	+	+	-	-	+
The respondent has a permanent job	-	-	-	-	-	-	-	+	-	-	-
The respondent was self-employed	+	+	+	+	+	+	+	+	+	-	+
The respondent lives in an urban core/urban fringe/urban outside metropolitan area/secondary urban core	+	+	-	-	+	n.s.	+	+	+	+	-
The respondent lives in Atlantic Canada	-	n.s.	+	-	-	+	+	+	-	-	-
The respondent lives in Quebec	n.s.	+	+	-	+	+	+	-	-	n.s.	-
The respondent lives in the Prairies	-	+	+	-	-	+	+	+	n.s.	n.s.	+
The respondent lives in British Columbia	-	+	+	+	+	+	+	+	+	+	+

n.s. indicates the estimate is not statistically different from zero

\+ estimate is positive

\- estimate is negative

Theatre Frequency of participation in theatrical performances (such as drama, musical, theatre, dinner theatre, comedy)

Popular Frequency of participation in popular musical performance (such as pop/rock, jazz, blues, folk, country and western)

Historic Frequency of going to historic sites

Parks Frequency of going to conservation areas or nature parks

Galleries Frequency of going to public galleries or art museums

Music Frequency of listening to music (on CD, cassettes tapes, audio discs)

Movies Frequency of going to a movie or drive-in

Videos Frequency of watching a video, rent or purchase VHS or DVD

Books Frequency of reading a book as leisure activity

Libraries Frequency of using library services as leisure activity (including accessing internet)

Magazines Frequency of reading a magazine as leisure activity

Table 2

List of dependent variables, and participation rates of Canadians aged 15 and over, by type of cultural activity

		Occasional	Frequent
Variable	**Description**	percentage	
Theatre	Frequency of participation in theatrical performances such as drama, musical, theatre, dinner theatre, comedy. 1 = Never took part in the past 12 months; 2 = Occasional participant (took part one to four times the past 12 months); 3 = Frequent participant (took part five times or more in the past 12 months).	17.12	5.10
Popular	Frequency of participation in popular musical performance such as pop/rock, jazz, blues, folk, country and western. 1 = Never took part in the past 12 months; 2 = Occasional participant (took part one to four times the past 12 months); 3 = Frequent participant (took part five times or more in the past 12 months).	19.00	4.38
Historic	Frequency of going to historic sites. 1 = Never went in the past 12 months; 2 = Occasional goer (went one to four times in the past12 months); 3 = Frequent goer (went five times or more in the past 12 months).	27.86	4.88
Parks	Frequency of going to conservation areas or nature parks. 1 = Never went in the past 12 months; 2 = Occasional goer (went one to four times in the past 12 months); 3 = Frequent goer (went five times or more in the past 12 months).	29.98	15.21
Galleries	Frequency of going to public galleries or art museums. 1 = Never went in the past 12 months; 2 = Occasional goer (went one to four times in the past 12 months); 3 = Frequent goer (went five times or more in the past 12 months).	22.25	3.98
Music	Frequency of listening to music on CD, cassettes tapes, DVD audio discs. 1 = Never listened in the past 12 months; 2 = Occasional listener (listened once a month to at least once a week but not daily); 3 = Frequent listener (listened on a daily basis).	38.38	43.87
Movies	Frequency of going to a movie or drive-in. 1 = Never went in the past 12 months; 2 = Occasional goer (went one to four times in the past 12 months); 3 = Frequent participant (took part five times or more during the past 12 months).	27.84	32.40
Videos	Frequency of watching a video, renting or purchasing VHS or DVD. 1 = Never watched in the past 12 months; 2 = Occasional watcher (watched one to five times or more in the past 12 months, but not every month); 3 = Frequent watcher (watched at least once a week).	45.92	31.35
Books	Frequency of reading a book as leisure activity. 1 = Never read in the past 12 months; 2 = Occasional reader (read at least a book a year, every six months or at least every three months); 3 = Frequent reader (read at least a book a week).	50.41	14.39
Libraries	Frequency of using library services as leisure activity (including accessing internet). 1 = Never used in the past 12 months; 2 = Occasional user (used at least once in the past 12 months but not every month); 3 = Frequent user (used at least once every week).	12.65	15.41
Magazines	Frequency of reading a magazine as leisure activity. 1 = Never read in the past 12 months; 2 = Occasional reader (read at least a magazine a year, every six months or at least every three months); 3 = Frequent reader (read at least one magazine a week).	34.98	41.89

Source: Statistics Canada, 2005 General Social Survey.

Table 3
List of explanatory variables

Variable	Description
Sex	Gender. Dichotomous variable 0 = Male; 1 = Female
Child0-4	Number of child(ren) aged from 0 to 4 years living in the respondent's household. Categorical variable. 0 = None; 1 = One child; 2 = Two or more children.
Child5-12	Number of child(ren) aged from 5 to 12 years living in the respondent's household. Categorical variable. 0 = None; 1 = One child; 2 = Two children; 3 = three or more children.
Agegrp	Age group of the respondent. Hierarchical variable. 0=15-24; 1=25-39; 2=40-54; 3=55 and over.
Faminc	Household total income. Hierarchical variable. 0 = No income or loss; 1 = <$30,000; 2 = $30,000-$59,999; 3 = $60,000 or more.
Edur	Highest level of education obtained by the respondent. Hierarchical variable. 0 = some secondary/elementary/no schooling; 1 = high school diploma; 2 = some university/community college; 3 = diploma/certificate from community college or trade/technical; 4 = doctorate/masters/bachelor's degree.
Edup	Highest level of education obtained by the respondent's partner. Hierarchical variable. Same categories as Edur.
Edud	Highest level of education obtained by the respondent's father. Hierarchical variable. Same categories as Edur.
Edum	Highest level of education obtained by the respondent's mother. Hierarchical variable. Same categories as Edur.
Married	The respondent is married. Dichotomous variable. 0 = No; 1 = Yes.
Comlaw	The respondent lives in a common-law marriage. Dichotomous variable. 0 = No; 1 = Yes.
Widowed	The respondent is widowed. Dichotomous variable. 0 = No; 1 = Yes.
Single	The respondent is single and never married. Dichotomous variable. 0 = No; 1 = Yes. The reference group categories for the marital status are divorced and separated Canadians.
Employ1	The respondent works in a management, business, finance or administrative occupation. Dichotomous variable. 0 = No; 1 = Yes.
Employ2	The respondent works in a natural and applied sciences/health/social sciences or education occupation. Dichotomous variable. 0 = No; 1 = Yes.
Employ3	The respondent works in an artistic/culture/recreation/sports/sales and services/trades, transport or equipment occupation. Dichotomous variable. 0 = No; 1 = Yes. The reference group category is unemployed Canadians or those having occupations unique to primary industry or processing and manufacturing.
Perm	The respondent has a permanent job. Dichotomous variable. 0 = No; 1 = Yes.
Seltemp	The respondent has a job or was self-employed at any time during the past 12 months. Dichotomous variable. 0 = No; 1 = Yes.
Urban	Residence of the respondent: urban core/urban fringe/urban outside metropolitan area/secondary urban core. Dichotomous variable. 1 = yes; 0 = no.
Atlantic	The respondent lives in the Atlantic region. Dichotomous variable. 0 = No; 1 = Yes.
Quebec	The respondent lives in Quebec. Dichotomous variable. 0 = No; 1 = Yes.
Prairies	The respondent lives in Prairies. Dichotomous variable. 0 = No; 1 = Yes.
British	The respondent lives in British Columbia. Dichotomous variable. 0 = No; 1 = Yes. The reference group category is Ontario.

Table 4

Participation rates of Canadians aged 15 and over, by socioeconomic background

	Theatre		Popular		Historic	
	Occasional	Frequent	Occasional	Frequent	Occasional	Frequent
	percentage					
Family income						
Less than $30,000	12.63	3.86	12.61	4.00	19.62	4.03
$30,000 to $59,999	15.36	3.62	17.98	3.10	26.24	4.07
$60,000 or more	23.31	6.95	25.74	5.19	37.12	6.64
Own schooling						
Some secondary or less	8.51	1.70	10.09	2.58	16.96	2.07
High school diploma	12.69	2.52	15.43	3.08	21.18	2.72
Some university / community college	16.33	4.90	21.68	5.89	29.11	5.12
College / technical diploma	18.12	5.31	22.29	3.79	30.80	5.18
University degree	27.87	10.01	24.42	6.59	38.80	8.57
Partner or spouse						
Some secondary or less	9.73	2.29	8.91	0.48	20.49	2.48
High school diploma	13.13	3.07	15.47	1.40	27.44	2.73
Some university / community college	18.82	3.55	21.06	3.59	28.07	4.55
College / technical diploma	19.67	6.49	20.54	2.05	32.65	5.78
University degree	25.14	9.28	25.06	4.91	39.91	7.57
Father						
Some secondary or less	14.21	3.79	18.15	2.95	23.72	3.31
High school diploma	16.82	4.63	21.00	4.34	28.56	5.11
Some university / community college	21.25	9.81	30.73	11.92	33.73	8.95
College / technical diploma	27.08	6.35	24.19	8.71	33.03	8.21
University degree	22.82	8.83	25.12	7.12	38.89	7.94
Mother						
Some secondary or less	15.97	4.31	16.01	3.03	27.54	3.90
High school diploma	19.39	4.82	22.38	5.03	30.93	5.17
Some university / community college	22.54	7.59	24.74	10.01	31.41	8.92
College / technical diploma	25.51	7.53	30.87	6.55	36.26	7.75
University degree	21.99	9.46	24.59	8.17	36.67	9.44
Employment sector						
Employ1	24.28	5.74	24.93	5.28	34.33	5.42
Employ2	24.38	7.75	26.31	5.90	40.09	5.58
Employ3	16.16	4.73	21.31	5.71	28.28	5.04
Marital status						
Married	17.13	5.30	17.15	2.06	29.98	4.63
Living common-law	17.08	4.00	21.20	5.27	28.21	5.11
Widowed	15.40	7.01	10.03	2.38	14.58	3.69
Single (never married)	17.10	4.54	23.73	8.86	26.21	5.63
Sex						
Male	14.27	4.43	18.33	5.18	28.10	5.81
Female	19.90	5.73	19.63	3.60	27.64	3.98

Table 4 (continued)

Participation rates of Canadians aged 15 and over, by socioeconomic background

	Parks		Galleries		Music		Movies	
	Occasional	Frequent	Occasional	Frequent	Occasional	Frequent	Occasional	Frequent
	percentage							
Family income								
Less than $30,000	23.86	11.28	17.09	3.76	37.89	40.34	22.91	22.17
$30,000 to $59,999	31.57	14.63	22.00	2.68	40.68	42.42	28.42	28.90
$60,000 or more	36.39	20.71	28.01	5.28	41.78	47.03	32.85	40.30
Own schooling								
Some secondary or less	19.60	1.34	11.41	1.81	35.79	40.19	17.52	26.00
High school diploma	25.07	2.37	14.04	2.30	35.61	42.20	25.93	27.51
Some university / community college	31.06	0.12	22.80	3.29	39.89	44.69	28.94	38.76
College / technical diploma	33.36	17.44	21.57	3.35	40.72	44.71	32.08	31.83
University degree	39.62	21.38	39.19	8.47	40.56	48.74	34.01	39.38
Partner or spouse								
Some secondary or less	20.35	9.83	12.22	1.09	42.31	29.99	21.70	10.25
High school diploma	29.82	13.10	16.99	1.77	43.65	36.67	28.5	21.83
Some university / community college	33.41	15.86	19.88	3.39	43.83	39.62	30.38	29.67
College / technical diploma	35.12	18.26	24.97	3.40	44.83	42.29	35.08	29.15
University degree	40.07	23.36	35.75	8.24	40.87	47.20	35.4	34.33
Father								
Some secondary or less	29.81	13.59	20.94	3.52	43.22	38.00	28.61	24.52
High school diploma	34.47	16.15	22.95	3.48	36.34	50.20	30.62	39.03
Some university / community college	34.93	20.79	30.65	9.35	40.15	51.56	24.25	49.11
College / technical diploma	40.99	19.81	30.32	5.14	33.07	56.96	29.48	50.56
University degree	34.58	23.98	34.19	7.56	36.28	53.44	30.65	46.89
Mother								
Some secondary or less	30.02	12.33	21.17	3.36	43.60	37.51	28.31	24.16
High school diploma	34.26	18.19	24.55	4.54	35.64	51.80	30.51	39.28
Some university / community college	33.47	18.00	33.33	5.97	34.57	56.57	31.03	47.67
College / technical diploma	36.29	22.53	31.88	4.65	36.21	54.39	32.90	47.07
University degree	35.89	22.79	32.25	8.35	35.21	52.74	27.97	48.99
Employment sector								
Employ1	36.41	17.19	26.00	4.00	44.29	44.35	32.86	39.10
Employ2	36.30	22.33	36.00	5.00	38.64	50.12	36.55	37.83
Employ3	31.77	16.08	20.00	4.00	36.29	48.93	27.71	38.98
Marital status								
Married	31.74	16.34	22.17	3.73	43.18	37.46	29.45	23.53
Living common-law	28.82	14.72	22.49	3.89	38.25	46.69	32.80	30.94
Widowed	16.88	5.83	17.46	3.26	40.15	26.54	19.19	14.69
Single (never married)	29.87	14.79	22.98	4.43	28.63	59.00	24.19	53.94
Sex								
Male	30.73	16.61	21.14	3.84	37.99	43.46	26.39	34.01
Female	29.24	13.85	23.33	4.13	38.77	44.27	29.24	30.83

Table 4 (concluded)

Participation rates of Canadians aged 15 and over, by socioeconomic background

	Videos		Books		Libraries		Magazines	
	Occasional	Frequent	Occasional	Frequent	Occasional	Frequent	Occasional	Frequent
	percentage							
Family income								
Less than $30,000	38.50	27.20	47.69	17.09	12.16	16.13	31.59	36.99
$30,000 to $59,999	47.15	30.62	48.76	17.17	13.25	17.84	37.31	39.50
$60,000 or more	52.55	36.11	57.80	12.55	14.74	14.98	36.10	47.78
Own schooling								
Some secondary or less	33.04	27.76	37.69	12.09	8.40	10.89	29.75	32.27
High school diploma	44.45	30.19	42.72	13.11	9.94	9.87	32.66	39.26
Some university / community college	51.08	32.55	55.16	13.01	13.86	13.86	37.11	47.20
College / technical diploma	46.68	35.26	53.21	13.31	12.93	15.53	38.95	41.55
University degree	54.69	30.43	61.50	19.72	17.46	24.58	35.71	49.48
Partner or spouse								
Some secondary or less	35.95	21.80	40.12	11.46	8.76	6.42	33.13	35.02
High school diploma	47.60	30.42	44.30	11.72	12.11	11.16	33.97	42.56
Some university / community college	48.60	33.10	49.32	16.58	15.03	12.90	42.07	40.08
College / technical diploma	51.22	35.78	57.43	12.30	14.83	15.46	37.02	42.48
University degree	52.90	32.12	58.86	17.83	17.18	23.44	32.09	51.81
Father								
Some secondary or less	48.88	26.87	50.12	14.02	12.22	14.08	33.61	42.81
High school diploma	46.64	38.18	54.07	13.95	12.91	15.96	37.36	44.50
Some university / community college	48.09	36.66	59.64	20.26	17.09	19.23	42.54	41.14
College / technical diploma	48.53	43.15	59.21	15.34	15.34	19.07	41.69	44.88
University degree	50.21	38.21	58.70	16.59	15.43	23.46	35.02	47.94
Mother								
Some secondary or less	47.64	26.58	49.12	14.54	12.50	14.50	33.86	43.67
High school diploma	47.65	38.39	53.42	15.09	12.44	17.19	37.81	44.68
Some university / community college	50.11	36.99	59.66	17.55	22.88	18.87	39.55	42.69
College / technical diploma	50.31	40.44	59.10	15.35	16.48	19.37	35.99	50.62
University degree	48.77	38.03	61.91	16.64	14.26	22.23	38.92	43.29
Employment sector								
Employ1	50.88	35.93	59.39	12.98	13.83	14.50	37.74	46.48
Employ2	54.20	33.84	61.12	15.23	16.78	18.90	38.74	44.16
Employ3	49.11	37.01	46.91	11.68	11.88	13.57	35.69	39.57
Marital status								
Married	47.06	28.49	49.35	14.60	13.12	14.81	33.04	44.15
Living common-law	44.88	38.76	48.97	9.76	13.55	10.82	39.62	34.06
Widowed	31.53	13.43	39.45	24.56	8.26	16.53	30.29	43.33
Single (never married)	46.98	38.60	54.85	13.06	12.30	18.39	38.11	40.82
Sex								
Male	44.89	34.32	47.22	9.91	10.40	12.88	31.82	41.08
Female	46.93	28.47	53.52	18.75	14.84	17.87	38.05	42.67

Source: Statistics Canada, 2005 General Social Survey.

Table 5
Kendall's rank correlation matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
1. Sex	1.00																																
2. Child0-4	0.02	1.00																															
3. Child5-12	0.02	0.23	1.00																														
4. Agegrp	0.02	-0.20	-0.16	1.00																													
5. Earning	-0.11	0.10	0.14	-0.11	1.00																												
6. Employ1	0.05	0.00	0.06	-0.08	0.17	1.00																											
7. Employ2	0.02	0.07	0.08	-0.11	0.19	-0.17	1.00																										
8. Employ3	-0.13	-0.00	0.04	-0.18	0.06	-0.23	-0.22	1.00																									
9. Edup	0.00	0.09	0.11	-0.08	0.27	0.16	0.29	-0.05	1.00																								
10. Edup	-0.06	0.22	0.22	-0.02	0.30	0.10	0.13	-0.01	0.27	1.00																							
11. Edut	-0.02	0.07	0.04	-0.28	0.13	0.06	0.12	0.02	0.24	0.10	1.00																						
12. Edum	-0.01	0.07	0.03	-0.32	0.14	0.06	0.13	0.05	0.22	0.08	0.56	1.00																					
13. Urban	0.00	0.01	-0.01	-0.04	0.03	0.03	0.05	0.00	0.10	0.01	0.11	0.08	1.00																				
14. Married	-0.05	0.14	0.18	0.16	0.18	0.04	0.03	-0.03	0.09	0.59	-0.05	-0.07	-0.06	1.00																			
15. Cantaw	-0.02	0.10	0.05	-0.10	0.08	0.04	0.03	0.03	0.03	0.17	0.00	0.00	0.00	-0.27	1.00																		
16. Widowed	0.15	-0.09	-0.11	0.34	-0.17	-0.11	-0.09	-0.13	-0.13	-0.23	-0.12	-0.13	-0.00	-0.28	-0.09	1.00																	
17. Single	-0.05	-0.12	-0.17	-0.41	-0.10	-0.02	-0.00	0.10	-0.04	-0.44	0.18	0.21	0.04	-0.54	-0.17	-0.18																	
18. Perm	-0.05	0.06	0.11	-0.23	0.25	0.30	0.24	0.27	0.18	0.13	0.08	0.10	0.03	0.03	0.08	-0.20	1.00																
19. Selfemp	-0.00	0.04	-0.00	-0.13	-0.03	-0.12	-0.11	-0.15	-0.03	-0.03	0.05	0.05	-0.03	-0.04	0.00	-0.06	-0.23	1.00															
20. Atlantic	0.02	-0.00	0.00	0.01	-0.03	-0.01	0.00	-0.00	-0.04	-0.02	-0.07	-0.05	-0.20	0.02	-0.03	0.02	-0.02	0.04	1.00														
21. Quebec	0.01	-0.00	0.00	0.01	-0.03	0.00	0.01	-0.01	-0.01	-0.03	-0.08	-0.10	0.03	-0.11	0.18	-0.01	-0.00	0.02	-0.24	1.00													
22. Ontario	-0.02	-0.00	-0.00	-0.01	0.02	-0.00	0.00	0.00	-0.01	-0.00	-0.00	0.03	-0.01	0.01	-0.05	0.00	0.03	-0.00	-0.25	-0.24	1.00												
23. Prairie	-0.01	-0.01	-0.01	0.00	-0.02	-0.01	-0.02	0.01	0.00	-0.00	0.05	0.06	0.05	0.00	-0.03	-0.00	-0.01	-0.03	-0.18	-0.18	-0.18	1.00											
24. Theatre	0.08	-0.06	-0.03	0.03	0.13	0.08	0.09	-0.02	0.20	0.07	0.11	0.12	0.07	0.00	-0.01	0.00	0.02	-0.01	-0.02	0.00	-0.02	0.00	1.00										
25. Popular	-0.00	-0.03	-0.01	-0.13	0.12	0.08	0.08	0.04	0.14	0.02	0.14	0.15	0.05	-0.08	0.01	-0.07	0.08	0.00	-0.01	0.02	-0.00	0.00	0.35	1.00									
26. Historic	-0.02	-0.01	0.03	-0.04	0.16	0.07	0.11	0.01	0.19	0.10	0.14	0.14	0.01	0.04	-0.00	-0.07	0.05	0.03	0.05	-0.03	-0.00	-0.00	0.26	0.20	1.00								
27. Parks	-0.03	0.07	0.08	-0.11	0.18	0.07	0.12	0.02	0.22	0.14	0.17	0.18	0.03	0.05	-0.00	-0.11	0.08	0.02	-0.01	-0.11	-0.01	0.05	0.18	0.19	0.34	1.00							
28. Movies	-0.00	0.00	0.06	-0.32	0.16	0.11	0.12	0.07	0.19	0.04	0.24	0.24	0.12	-0.12	0.02	-0.14	0.13	0.04	-0.03	0.04	0.00	-0.00	0.22	0.25	0.18	0.18	1.00						
29. Videos	-0.04	0.09	0.13	-0.33	0.16	0.10	0.08	0.10	0.13	0.10	0.18	0.18	0.05	-0.01	0.06	-0.17	0.17	0.05	-0.00	-0.07	0.02	0.02	0.05	0.12	0.11	0.16	0.29	1.00					
30. Galleries	0.03	-0.04	-0.00	-0.00	0.12	0.04	0.12	-0.01	0.24	0.08	0.16	0.16	0.09	-0.01	-0.00	-0.02	0.00	-0.00	-0.05	0.02	-0.02	0.04	0.33	0.23	0.34	0.25	0.21	0.07	1.00				
31. Books	0.18	-0.03	-0.03	0.01	0.07	0.04	0.07	-0.07	0.18	0.04	0.11	0.11	0.04	-0.01	-0.05	0.03	-0.01	0.01	0.00	-0.05	-0.00	0.03	0.18	0.11	0.16	0.14	0.12	0.08	0.23	1.00			
32. Libraries	0.09	0.01	0.06	-0.05	0.05	-0.00	0.07	-0.03	0.16	0.06	0.11	0.11	0.05	-0.00	-0.03	-0.02	-0.01	0.02	-0.04	-0.00	-0.01	0.04	0.14	0.07	0.14	0.16	0.11	0.07	0.20	0.30	1.00		
33. Magazines	0.06	-0.03	-0.02	0.00	0.10	0.04	0.04	-0.02	0.14	0.07	0.08	0.09	0.01	0.04	-0.03	-0.00	0.00	-0.00	-0.04	-0.06	0.03	0.05	0.13	0.12	0.14	0.12	0.14	0.11	0.15	0.20	0.10	1.00	
34. Music	0.01	0.04	0.03	-0.24	0.10	0.05	0.07	0.06	0.12	0.03	0.15	0.16	0.03	-0.07	0.03	-0.11	0.08	0.05	-0.00	-0.01	-0.00	0.02	0.11	0.18	0.12	0.16	0.23	0.26	0.13	0.12	0.09	0.14	1.00

Note: Tau b is used to measure the strength of dependence between variables.

Source: Statistics Canada, 2005 General Social Survey.

Table 6

Weighted stereotype logistic regression, marginal effect, social correlates of cultural participation

	Theatre			
Variables	Occasional participation	Standard error	Regular participation	Standard error
Sex	0.055***	(36.584)	0.020***	(37.991)
Child0-4	-0.060***	(26.831)	-0.022***	(27.119)
Child5-12	-0.021***	(16.136)	-0.008***	(16.318)
Agegrp	0.013***	(43.147)	0.005***	(37.525)
Faminc	0.017***	(24.031)	0.006***	(25.531)
Edur	0.029***	(50.591)	0.011***	(46.943)
Edup	0.021***	(33.666)	0.008***	(31.418)
Eduf	0.009***	(15.691)	0.003***	(15.670)
Edum	0.017***	(27.840)	0.006***	(26.701)
Married	-0.056***	(20.563)	-0.021***	(19.764)
Comlaw	-0.048***	(18.776)	-0.016***	(20.354)
Widowed	-0.007**	(2.461)	-0.003**	(2.496)
Single	0.023***	(8.397)	0.008***	(8.135)
Employ1	0.088***	(29.625)	0.037***	(26.412)
Employ2	0.084***	(28.110)	0.035***	(24.153)
Employ3	0.075***	(31.216)	0.030***	(26.316)
Perm	-0.035***	(20.759)	-0.013***	(20.121)
Selfemp	0.054***	(16.403)	0.022***	(14.475)
Urban	0.009***	(5.289)	0.003***	(5.346)
Atlantic	-0.025***	(14.592)	-0.009***	(14.940)
Quebec	-0.001	(0.358)	-0.000	(0.358)
Prairies	-0.014***	(7.811)	-0.005***	(8.128)
British	-0.014***	(6.860)	-0.005***	(7.065)
Number of observations	1.689	...	515	...

	Theatre	
	Frequency of participation	Standard error
Phi1 = never participating	1.00	...
Phi2 = occational participation	0.31***	(6.19)
Phi3 = regular participation	0.00	...
F-test: null hypothesis is that all socioeconomic coefficients equal zero	385.87***	...

Table 6 (continued)

Weighted stereotype logistic regression, marginal effect, social correlates of cultural participation

	Popular			
	Occasional participation	Standard error	Regular participation	Standard error
Sex	0.003*	(1.878)	0.001*	(1.897)
Child0-4	-0.052***	(24.327)	-0.017***	(24.138)
Child5-12	-0.023***	(17.654)	-0.007***	(16.788)
Agegrp	-0.006***	(22.219)	-0.002***	(22.166)
Famінc	0.016***	(19.630)	0.005***	(22.357)
Edur	0.020***	(32.679)	0.007***	(31.679)
Edup	0.018***	(25.507)	0.006***	(24.534)
Eduf	0.005***	(8.462)	0.002***	(8.340)
Edum	0.011***	(17.460)	0.003***	(17.927)
Married	-0.076***	(25.824)	-0.025***	(23.291)
Comlaw	-0.040***	(12.892)	-0.012***	(14.166)
Widowed	-0.011**	(2.582)	-0.003***	(2.652)
Single	0.027***	(10.007)	0.009***	(9.496)
Employ1	0.078***	(26.454)	0.030***	(22.693)
Employ2	0.070***	(23.740)	0.026***	(20.139)
Employ3	0.070***	(27.753)	0.025***	(23.749)
Perm	-0.025***	(16.413)	-0.008***	(16.171)
Selfemp	0.012***	(3.557)	0.004***	(3.423)
Urban	0.012***	(6.644)	0.004***	(6.750)
Atlantic	0.001	(0.647)	0.000	(0.646)
Quebec	0.032***	(14.421)	0.011***	(14.119)
Prairies	0.007***	(3.553)	0.002***	(3.538)
British	0.014***	(6.392)	0.005***	(6.273)
Number of observations	1,827	...	400	...

	Popular	
	Frequency of participation	Standard error
Phi1 = never participating	1.00	...
Phi2 = occational participation	0.40***	(7.310)
Phi3 = regular participation	0.00	...
F-test: null hypothesis is that all socioeconomic coefficients equal zero	356.04***	...

Table 6 (continued)

Weighted stereotype logistic regression, marginal effect, social correlates of cultural participation

	Historic			
	Occasional participation	Standard error	Regular participation	Standard error
Sex	-0.011***	(6.002)	-0.003***	(5.861)
Child0-4	-0.043***	(17.230)	-0.011***	(17.168)
Child5-12	-0.004***	(2.818)	-0.001***	(2.799)
Agegrp	0.004***	(11.961)	0.001***	(11.693)
Faminc	0.030***	(34.491)	0.008***	(33.296)
Edur	0.033***	(43.338)	0.008***	(33.977)
Edup	0.019***	(21.998)	0.005***	(22.121)
Eduf	0.015***	(19.109)	0.004***	(19.944)
Edum	0.021***	(26.901)	0.005***	(23.482)
Married	-0.041***	(12.835)	-0.010***	(12.713)
Comlaw	-0.048***	(11.924)	-0.011***	(12.774)
Widowed	-0.065***	(16.530)	-0.015***	(18.532)
Single	-0.011***	(3.062)	-0.003***	(3.106)
Employ1	0.078***	(24.017)	0.022***	(21.679)
Employ2	0.088***	(24.119)	0.025***	(23.326)
Employ3	0.070***	(24.197)	0.019***	(21.608)
Perm	-0.043***	(19.532)	-0.011***	(18.209)
Selfemp	0.084***	(20.854)	0.024***	(17.081)
Urban	-0.020***	(8.774)	-0.005***	(8.435)
Atlantic	0.082***	(29.889)	0.023***	(25.612)
Quebec	0.013***	(4.963)	0.003***	(4.935)
Prairies	0.028***	(10.722)	0.007***	(10.552)
British	0.014***	(4.764)	0.004***	(4.715)
Number of observations	2,839	...	506	...

	Historic	
	Frequency of participation	Standard error
Phi1 = never participating	1.00	...
Phi2 = occational participation	0.31***	(5.19)
Phi3 = regular participation	0.00	...
F-test: null hypothesis is that all socioeconomic coefficients equal zero	254.82***	...

Table 6 (continued)

Weighted stereotype logistic regression, marginal effect, social correlates of cultural participation

	Parks			
	Occasional participation	Standard error	Regular participation	Standard error
Sex	-0.016***	(10.982)	-0.013***	(10.819)
Child0-4	0.016***	(8.683)	0.013***	(8.817)
Child5-12	0.011***	(9.517)	0.009***	(9.643)
Agegrp	-0.001***	(3.840)	-0.001***	(3.820)
Faminc	0.024***	(35.016)	0.020***	(37.661)
Edur	0.026***	(41.088)	0.022***	(45.832)
Edup	0.018***	(25.656)	0.015***	(27.876)
Eduf	0.010***	(16.338)	0.008***	(16.592)
Edum	0.013***	(20.042)	0.011***	(19.767)
Married	-0.053***	(20.475)	-0.045***	(20.662)
Comlaw	-0.062***	(18.622)	-0.046***	(21.391)
Widowed	-0.085***	(24.779)	-0.060***	(28.665)
Single	-0.029***	(10.371)	-0.023***	(10.589)
Employ1	0.041***	(17.306)	0.037***	(16.950)
Employ2	0.050***	(20.865)	0.047***	(18.560)
Employ3	0.044***	(20.901)	0.039***	(20.543)
Perm	-0.013***	(7.406)	-0.011***	(7.492)
Selfemp	0.054***	(21.606)	0.051***	(18.981)
Urban	-0.020***	(12.165)	-0.017***	(11.547)
Atlantic	-0.029***	(15.212)	-0.023***	(15.162)
Quebec	-0.100***	(50.791)	-0.075***	(49.261)
Prairies	-0.042***	(21.225)	-0.033***	(22.094)
British	0.011***	(5.310)	0.010***	(5.162)
Number of observations	2.948	...	1.392	...

	Parks	
	Frequency of participation	Standard error
Phi1 = never participating	1.00	...
Phi2 = occational participation	0.19***	(8.22)
Phi3 = regular participation	0.31	...
F-test: null hypothesis is that all socioeconomic coefficients equal zero	655.76***	...

Table 6 (concluded)

Weighted stereotype logistic regression, marginal effect, social correlates of cultural participation

	Galleries			
	Occasional participation	Standard error	Regular participation	Standard error
Sex	0.028***	(17.196)	0.006***	(16.895)
Child0-4	-0.064***	(25.118)	-0.014***	(24.621)
Child5-12	-0.014***	(8.896)	-0.003***	(8.724)
Agegrp	0.010***	(28.513)	0.002***	(26.450)
Faminc	0.015***	(18.928)	0.003***	(18.884)
Edur	0.043***	(61.913)	0.009***	(51.167)
Edup	0.034***	(42.451)	0.007***	(38.240)
Eduf	0.016***	(21.898)	0.003***	(21.183)
Edum	0.021***	(26.667)	0.004***	(26.044)
Married	-0.097***	(30.756)	-0.021***	(29.323)
Comlaw	-0.074***	(24.214)	-0.015***	(25.879)
Widowed	-0.045***	(13.900)	-0.009***	(14.614)
Single	0.022***	(6.980)	0.005***	(6.822)
Employ1	0.052***	(16.175)	0.012***	(15.365)
Employ2	0.095***	(27.497)	0.023***	(25.464)
Employ3	0.055***	(18.700)	0.012***	(17.188)
Perm	-0.061***	(29.783)	-0.013***	(28.303)
Selfemp	0.040***	(10.749)	0.009***	(10.232)
Urban	0.032***	(16.142)	0.007***	(16.194)
Atlantic	-0.025***	(10.890)	-0.005***	(11.085)
Quebec	0.030***	(12.725)	0.007***	(12.196)
Prairies	-0.015***	(6.557)	-0.003***	(6.699)
British	0.032***	(11.202)	0.007***	(10.636)
Number of observations	2,195	...	403	...

	Galleries	
	Frequency of participation	Standard error
Phi1 = never participating	1.00	...
Phi2 = occational participation	0.26***	(4.62)
Phi3 = regular participation	0.00	...
F-test: null hypothesis is that all socioeconomic coefficients equal zero	301.97***	...

* Coefficient significant at 10% significance level

** Coefficient significant at 5% significance level

*** Coefficient significant at 1% significance level

Notes: The bootstrap t statistics are reported in parentheses in the column beside each parameter estimate, with standard errors computed using 500 bootstrap replicate samples.

Source: Statistics Canada, 2005 General Social Survey.

Table 7

Weighted stereotype logistic regression, marginal effect, social correlates of cultural participation

	Music			
	Occasional participation	Standard error	Regular participation	Standard error
Sex	-0.012***	(13.824)	0.033***	(13.958)
Child0-4	0.010***	(9.017)	-0.027***	(9.111)
Child5-12	0.009***	(11.452)	-0.023***	(11.505)
Agegrp	0.012***	(28.840)	-0.032***	(53.573)
Faminc	-0.009***	(19.682)	0.023***	(19.348)
Edur	-0.009***	(23.147)	0.023***	(26.216)
Edup	-0.007***	(16.443)	0.019***	(17.742)
Eduf	-0.004***	(11.800)	0.012***	(11.994)
Edum	-0.001**	(2.216)	0.002**	(2.213)
Married	0.030***	(16.369)	-0.079***	(19.123)
Comlaw	0.020***	(13.229)	-0.060***	(12.471)
Widowed	0.006***	(3.412)	-0.017***	(3.304)
Single	-0.000	(0.104)	0.000	(0.104)
Employ1	-0.011***	(6.729)	0.028***	(6.810)
Employ2	-0.014***	(7.748)	0.034***	(8.064)
Employ3	-0.015***	(9.844)	0.037***	(10.204)
Perm	0.016***	(13.707)	-0.042***	(13.560)
Selfemp	-0.003*	(1.717)	0.009*	(1.744)
Urban	0.001	(0.974)	-0.003	(0.976)
Atlantic	-0.011***	(8.511)	0.028***	(8.982)
Quebec	-0.005***	(4.392)	0.014***	(4.347)
Prairies	-0.003***	(2.869)	0.009***	(2.892)
British	-0.016***	(10.125)	0.040***	(11.027)
Number of observations	3,820	...	4,167	...

	Music	
	Frequency of participation	Standard error
Phi1 = never participating	1.00	...
Phi2 = occational participation	0.52***	(12.92)
Phi3 = regular participation	0.00	...
F-test: null hypothesis is that all socioeconomic coefficients equal zero	667.68***	...

Table 7 (continued)

Weighted stereotype logistic regression, marginal effect, social correlates of cultural participation

	Movies			
	Occasional participation	Standard error	Regular participation	Standard error
Sex	0.001***	(2.909)	0.006***	(2.972)
Child0-4	-0.021***	(27.731)	-0.100***	(38.073)
Child5-12	-0.002***	(5.059)	-0.008***	(5.025)
Agegrp	-0.008***	(33.795)	-0.038***	(77.513)
Faminc	0.009***	(27.143)	0.041***	(42.413)
Edur	0.007***	(26.525)	0.036***	(44.968)
Edup	0.005***	(21.292)	0.024***	(26.922)
Eduf	0.003***	(16.063)	0.017***	(18.550)
Edum	0.003***	(14.130)	0.014***	(15.991)
Married	-0.026***	(25.923)	-0.131***	(36.474)
Comlaw	-0.045***	(22.149)	-0.129***	(34.331)
Widowed	0.003***	(3.812)	0.019***	(3.430)
Single	0.004***	(4.410)	0.018***	(4.180)
Employ1	0.013***	(20.917)	0.104***	(29.095)
Employ2	0.009***	(17.490)	0.061***	(17.295)
Employ3	0.012***	(20.518)	0.070***	(22.474)
Perm	-0.009***	(15.477)	-0.043***	(17.540)
Selfemp	0.007***	(12.350)	0.044***	(10.292)
Urban	0.022***	(25.849)	0.080***	(35.373)
Atlantic	0.005***	(10.474)	0.030***	(9.704)
Quebec	0.014***	(22.228)	0.099***	(33.572)
Prairies	0.009***	(18.622)	0.053***	(19.762)
British	0.002***	(3.547)	0.011***	(3.407)
Number of observations	2,731	...	2,933	...

	Movies	
	Frequency of participation	Standard error
Phi1 = never participating	1.00	...
Phi2 = occational participation	0.42***	(18.01)
Phi3 = regular participation	0.00	...
F-test: null hypothesis is that all socioeconomic coefficients equal zero	1,467.25***	...

Table 7 (continued)

Weighted stereotype logistic regression, marginal effect, social correlates of cultural participation

	Videos			
	Occasional participation	Standard error	Regular participation	Standard error
Sex	-0.004***	(10.781)	-0.018***	(10.420)
Child0-4	-0.006***	(10.636)	-0.026***	(11.512)
Child5-12	0.002***	(4.331)	0.007***	(4.252)
Agegrp	-0.007***	(23.237)	-0.030***	(59.300)
Faminc	0.006***	(17.134)	0.027***	(40.086)
Edur	0.003***	(13.763)	0.012***	(20.214)
Edup	0.003***	(12.406)	0.011***	(15.760)
Eduf	0.002***	(11.881)	0.010***	(14.823)
Edum	0.001**	(2.037)	0.001**	(2.076)
Married	-0.005***	(8.318)	-0.022***	(9.036)
Comlaw	-0.001	(1.19)	-0.004	(1.267)
Widowed	0.003***	(4.944)	0.013***	(4.263)
Single	-0.013***	(11.960)	-0.046***	(15.210)
Employ1	0.007***	(12.132)	0.046***	(17.001)
Employ2	0.005***	(9.165)	0.025***	(8.761)
Employ3	0.008***	(12.715)	0.046***	(18.419)
Perm	0.001**	(2.238)	0.005**	(2.207)
Selfemp	0.005***	(10.985)	0.033***	(10.567)
Urban	0.007***	(10.628)	0.024***	(13.150)
Atlantic	0.003***	(7.088)	0.014***	(6.398)
Quebec	-0.012***	(14.824)	-0.039***	(19.696)
Prairies	0.004***	(10.834)	0.022***	(9.878)
British	0.003***	(7.809)	0.017***	(6.834)
Number of observations	4,421	...	2,848	...

	Videos	
	Frequency of participation	Standard error
Phi1 = never participating	1.00	...
Phi2 = occational participation	0.28***	(10.57)
Phi3 = regular participation	0.00	...
F-test: null hypothesis is that all socioeconomic coefficients equal zero	1,378.06***	...

Table 7 (continued)

Weighted stereotype logistic regression, marginal effect, social correlates of cultural participation

	Books			
	Occasional participation	Standard error	Regular participation	Standard error
Sex	0.118***	(64.349)	0.057***	(39.096)
Child0-4	-0.038***	(16.898)	-0.018***	(15.642)
Child5-12	-0.028***	(20.224)	-0.014***	(19.099)
Agegrp	0.005***	(14.550)	0.002***	(12.948)
Faminc	0.022***	(24.650)	0.010***	(26.551)
Edur	0.037***	(48.485)	0.018***	(40.738)
Edup	0.024***	(30.287)	0.012***	(26.429)
Eduf	0.006***	(7.965)	0.003***	(7.993)
Edum	0.022***	(25.676)	0.011***	(25.358)
Married	-0.076***	(26.190)	-0.037***	(23.141)
Comlaw	-0.103***	(22.934)	-0.044***	(25.091)
Widowed	-0.032***	(7.147)	-0.015***	(7.640)
Single	0.014***	(4.231)	0.007***	(4.205)
Employ1	0.020***	(6.859)	0.010***	(6.983)
Employ2	0.027***	(8.720)	0.014***	(8.687)
Employ3	-0.017***	(6.542)	-0.008***	(6.637)
Perm	-0.031***	(14.543)	-0.015***	(14.241)
Selfemp	0.024***	(7.156)	0.012***	(6.998)
Urban	0.006***	(2.924)	0.003***	(2.954)
Atlantic	-0.004*	(1.909)	-0.002*	(1.913)
Quebec	-0.033***	(14.885)	-0.015***	(13.468)
Prairies	0.002	(1.053)	0.001	(1.049)
British	0.020***	(8.037)	0.010***	(7.726)
Number of observations	4,885	...	1,605	...

	Books	
	Frequency of participation	Standard error
Phi1 = never participating	1.00	...
Phi2 = occational participation	0.19***	(3.96)
Phi3 = regular participation	0.00	...
F-test: null hypothesis is that all socioeconomic coefficients equal zero	539.08***	...

Table 7 (continued)

Weighted stereotype logistic regression, marginal effect, social correlates of cultural participation

	Libraries			
	Occasional participation	Standard error	Regular participation	Standard error
Sex	0.035***	(29.423)	0.060***	(44.289)
Child0-4	-0.005***	(4.646)	-0.008***	(4.537)
Child5-12	0.010***	(13.386)	0.017***	(14.282)
Agegrp	-0.001***	(6.107)	-0.002***	(6.034)
Faminc	0.003***	(7.940)	0.005***	(8.284)
Edur	0.016***	(36.460)	0.027***	(45.258)
Edup	0.014***	(31.479)	0.023***	(33.417)
Eduf	0.004***	(11.950)	0.007***	(12.011)
Edum	0.003***	(8.997)	0.006***	(9.108)
Married	-0.027***	(17.044)	-0.046***	(17.156)
Comlaw	-0.037***	(21.242)	-0.058***	(22.434)
Widowed	0.003	(1.560)	0.005	(1.534)
Single	0.018***	(10.735)	0.031***	(10.395)
Employ1	-0.017***	(12.709)	-0.028***	(12.959)
Employ2	-0.006***	(4.298)	-0.010***	(4.288)
Employ3	-0.009***	(7.998)	-0.016***	(8.001)
Perm	-0.018***	(18.122)	-0.031***	(17.809)
Selfemp	-0.004***	(2.830)	-0.007***	(2.833)
Urban	0.006***	(5.871)	0.009***	(5.926)
Atlantic	-0.013***	(10.986)	-0.022***	(11.560)
Quebec	0.000	(0.108)	0.000	(0.108)
Prairies	-0.001	(1.165)	-0.002	(1.169)
British	0.012***	(8.622)	0.020***	(8.665)
Number of observations	1,222	...	1,514	...

	Libraries	
	Frequency of participation	Standard error
Phi1 = never participating	1.00	...
Phi2 = occational participation	0.25***	(3.31)
Phi3 = regular participation	0.00	...
F-test: null hypothesis is that all socioeconomic coefficients equal zero	421.50***	...

Table 7 (concluded)

Weighted stereotype logistic regression, marginal effect, social correlates of cultural participation

	Magazines			
	Occasional participation	Standard error	Regular participation	Standard error
Sex	0.022***	(15.050)	0.060***	(39.086)
Child0-4	-0.009***	(10.965)	-0.024***	(11.912)
Child5-12	-0.008***	(13.641)	-0.022***	(17.461)
Agegrp	0.000	(0.200)	0.000	(0.200)
Faminc	0.008***	(16.298)	0.022***	(26.749)
Edur	0.011***	(16.678)	0.029***	(36.749)
Edup	0.004***	(14.605)	0.011***	(13.265)
Eduf	0.003***	(9.047)	0.007***	(10.138)
Edum	0.003***	(9.793)	0.009***	(12.127)
Married	0.002	(1.638)	0.004*	(1.668)
Comlaw	-0.008***	(5.557)	-0.020***	(5.656)
Widowed	0.009***	(8.336)	0.027***	(8.835)
Single	0.012***	(10.710)	0.035***	(12.693)
Employ1	0.012***	(11.386)	0.036***	(14.253)
Employ2	0.001	(1.395)	0.004	(1.402)
Employ3	0.001*	(1.781)	0.004***	(1.773)
Perm	-0.006***	(8.293)	-0.016***	(8.452)
Selfemp	0.007***	(5.785)	0.019***	(6.261)
Urban	-0.006***	(9.011)	-0.016***	(9.107)
Atlantic	-0.008***	(9.869)	-0.021***	(10.146)
Quebec	-0.011***	(12.636)	-0.029***	(12.986)
Prairies	0.002***	(2.708)	0.005***	(2.673)
British	0.009***	(10.257)	0.025***	(10.518)
Number of observations	3,414	...	4,101	...

	Magazines	
	Frequency of participation	Standard error
Phi1 = never participating	1.00	...
Phi2 = occational participation	0.15***	(2.73)
Phi3 = regular participation	0.00	...
F-test: null hypothesis is that all socioeconomic coefficients equal zero	466.45***	...

* Coefficient significant at 10% significance level

** Coefficient significant at 5% significance level

*** Coefficient significant at 1% significance level

Notes: The bootstrap t statistics are reported in parentheses in the column beside each parameter estimate, with standard errors computed using 500 bootstrap replicate samples.

Source: Statistics Canada, 2005 General Social Survey.

Culture, Tourism and the Centre for Education Statistics

Research Papers

Cumulative index

Statistics Canada's **Division of Culture, Tourism and the Centre for Education Statistics** develops surveys, provides statistics and conducts research and analysis relevant to current issues in its three areas of responsibility.

The **Culture Statistics Program** creates and disseminates timely and comprehensive information on the culture sector in Canada. The program manages a dozen regular census surveys and databanks to produce data that support policy decision and program management requirements. Issues include the economic impact of culture, the consumption of culture goods and services, government, personal and corporate spending on culture, the culture labour market, and international trade of culture goods and services. Analysis is also published in *Focus on Culture* (87-004-XIE, free, http://www.statcan.ca/bsolc/english/bsolc?catno=87-004-X).

The **Tourism Statistics Program** provides information on domestic and international tourism. The program covers the Canadian Travel Survey and the International Travel Survey. Together, these surveys shed light on the volume and characteristics of trips and travellers to, from and within Canada.

The **Centre for Education Statistics** develops and delivers a comprehensive program of pan-Canadian education statistics and analysis in order to support policy decisions and program management, and to ensure that accurate and relevant information concerning education is available to the Canadian public and to other educational stakeholders. The Centre conducts fifteen institutional and over ten household education surveys. Analysis is also published in *Education Matters* (81-004-XIE, free, http://www.statcan.ca/bsolc/english/bsolc?catno=81-004-X), and in the *Analytical Studies Branch research paper series* (11F0019MIE, free, http://www.statcan.ca/bsolc/english/bsolc?catno=11F0019M).

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81-595-M no. 001	Understanding the rural-urban reading gap
81-595-M no. 002	Canadian education and training services abroad: the role of contracts funded by international financial institution
81-595-M No. 003	Finding their way: a profile of young Canadian graduates
81-595-M No. 004	Learning, earning and leaving – The relationship between working while in high school and dropping out
81-595-M No. 005	Linking provincial student assessments with national and international assessments
81-595-M No. 006	Who goes to post-secondary education and when: Pathways chosen by 20 year-olds
81-595-M No. 007	Access, persistence and financing: First results from the Postsecondary Education Participation Survey (PEPS)
81-595-M No. 008	The labour market impacts of adult education and training in Canada
81-595-M No. 009	Issues in the design of Canada's Adult Education and Training Survey
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81-595-M No. 011	A new understanding of postsecondary education in Canada: A discussion paper
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81-595-M No. 013	Salaries and salary scales of full-time teaching staff at Canadian universities, 2001-2002: final report
81-595-M No. 014	In and out of high school: First results from the second cycle of the Youth in Transition Survey, 2002
81-595-M No. 015	Working and Training: First Results of the 2003 Adult Education and Training Survey
81-595-M No. 016	Class of 2000: Profile of Postsecondary Graduates and Student Debt
81-595-M No. 017	Connectivity and ICT integration in Canadian elementary and secondary schools: First results from the Information and Communications Technologies in Schools Survey, 2003-2004
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Research papers

81-595-M No. 019	Salaries and salary scales of full-time teaching staff at Canadian universities, 2003-2004
81-595-M No. 020	Culture Goods Trade Estimates: Methodology and Technical Notes
81-595-M No. 021	Canadian Framework for Culture Statistics
81-595-M No. 022	Summary public school indicators for the provinces and territories, 1996-1997 to 2002-2003
81-595-M No. 023	Economic Contribution of Culture in Canada
81-595-M No. 024	Economic Contributions of the Culture Sector in Ontario
81-595-M No. 025	Economic Contribution of the Culture Sector in Canada – A Provincial Perspective
81-595-M No. 026	Who pursues postsecondary education, who leaves and why: Results from the Youth in Transition Survey
81-595-M No. 027	Salaries and salary scales of full-time teaching staff at Canadian universities, 2002-2003: final report
81-595-M No. 028	Canadian School Libraries and Teacher-Librarians: Results from the 2003/04 Information and Communications Technologies in Schools Survey
81-595-M No. 029	Manitoba Postsecondary Graduates from the Class of 2000: How Did They Fare?
81-595-M No. 030	Salaries and Salary Scales of Full-time teaching Staff at Canadian Universities, 2004-2005: Preliminary Report
81-595-M No. 031	Salaries and salary scales of full-time teaching staff at Canadian universities, 2003-2004: final report
81-595-M No. 032	Survey of Earned Doctorates: A Profile of Doctoral Degree Recipients
81-595-M No. 033	The Education Services Industry in Canada
81-595-M No. 034	Connectivity and ICT Integration in First Nations Schools: Results from the Information and Communications Technologies in Schools Survey, 2003/04
81-595-M No. 035	Registered Apprentices: A Class Ten Years Later
81-595-M No. 036	Participation in Postsecondary Education: Evidence from the Survey of Labour Income Dynamics
81-595-M No. 037	Economic Contribution of the Culture sector to Canada's Provinces
81-595-M No. 038	Profile of Selected Culture Industries in Ontario

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81-595-M No. 046	Salaries and Salary Scales of Full-time Teaching Staff at Canadian Universities, 2005/2006: Preliminary Report
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81-595-M No. 051	Culture Employment in a North American Context
81-595-M No. 052	Salaries and Salary Scales of Full-time Teaching Staff at Canadian Universities, 2006/2007: Preliminary Report
81-595-M No. 053	Towards a Geography of Culture: Culture Occupations Across the Canadian Urban-Rural Divide
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81-595-M No. 056	Trade in Culture Services A Handbook of Concepts and Methods
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81-595-M No. 062	Salaries and Salary Scales of Full-time Teaching Staff at Canadian Universities, 2007/2008: Preliminary Report
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